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Ontario. Legislature Assembly

SESSIONAL PAPERS.

10 S

VOL. XXVIII.—PART VI.

SECOND SESSION EIGHTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO.

SESSION 1896.

38330
30/11/96.

TORONTO:
PRINTED FOR LUD. K. CAMERON, QUEEN'S PRINTER,
BY WARWICK BROS. & RUTTER, 68 AND 70 FRONT STREET WEST.
1896.

LIST OF SESSIONAL PAPERS.

ARRANGED ALPHABETICALLY.

TITLE.	No.	REMARKS.
Accounts, Public	3	*Printed.*
Actions and References, pending	58	*Not printed.*
Agricultural College, Report	18	*Printed.*
Agriculture and Arts, Report	28	"
Archæological, Report (part of)	2	"
Asylums, Report	11	"
Bee-Keepers' Association, Report	22	*Printed.*
Births, Marriages and Deaths, Report	30	"
Blind Institute, Report	15	"
Bonds and Securities	59	*Not printed.*
Burlington Beach, correspondence	70	"
Cattle Breeders' Association	27	*Printed.*
Central Prison, Stock in Industrial Department	61	"
do agreement *re* binder twine	65	"
do cost of machinery *re* binder twine	67	"
do Massie charges	69	*Not printed.*
Childrens' Protection Act, Report	17	*Printed.*
Crown Lands, Report	5	"
Dairymen and Creameries, Report	24	*Printed.*
Deaf and Dumb Institute, Report	16	"
Division Courts, Report	7	"
Dominion Cattle Breeders' Association, Report	27	"
Doyle, Judge, Surrogate fees	42	*Not printed.*
Dysart, water lot	49	"
Education, Orders in Council in 1895	50	*Printed.*
do Ottawa Separate Schools	1	"
do Report	2	"
do affiliation, School of Pedagogy	64	"
do publication of Writing Course	71	"
do do Physical Science	72	"
do do Readers	73	"
do Normal Schools in London	52	*Not printed.*
do children passing leaving examinations	80	"

Title.	No.	Remarks.
Elections, return from Records of	41	*Printed.*
Elgin House of Industry Report	54	*Not printed.*
Elliott, Junior Judge, Surrogate fees	66	"
Entomological Society, Report	4	*Printed.*
Estimates	19	"
Factories, Report	29	*Printed.*
Farmers' Institutes, Report	25	"
Forestry, Report	40	"
Fruit, Experiment Stations	21	"
" Growers', Report	20	"
Game and Fish, Report	33	*Printed.*
Gaols, Common, Report	12	"
Hazelwood and Whalen, pulpwood agreement	74	*Not printed.*
Health, Report	35	*Printed.*
Hospitals, Report	14	"
Immigration, Report	36	*Printed*
Industries, Bureau, Report	6	"
Insurance, Report	10	"
Jones, Judge, commutation	43	*Not printed.*
Legal Offices, Report	31	*Printed.*
Library Report	78	"
License Commissioners, names, etc	47	*Not printed.*
Medical Council, prosecutions	48	*Not printed.*
Mosgrove, Judge, Surrogate fees	44	"
Municipal indebtedness	68	*Printed.*
Murdock, William	81	*Not printed.*
Normal Schools in London	52	*Not printed.*
Ottawa Separate Schools, Report	1	*Printed.*
Printing and Binding, amounts paid for	76	*Not printed.*
Poultry and Pet Stock, Report	23	*Printed.*
Public Accounts	3	"
Public Officers	63	*Not printed.*
Public Works, Report	9	*Printed.*
Pulpwood agreement	74	*Not printed.*
Queen Victoria Niagara Falls Park, Report	32	*Printed.*
Quiball, Police Magistrate	53	*Not printed.*
Refuge, Houses of	13	*Printed.*

Title.	No.	Remarks.
Registrar's fees	62	*Printed.*
Secretary and Registrar's Report	77	"
Sheep and Swine Breeders', Report	26	"
Smith, John W., Bailiff in Peel	56	*Not printed.*
Statutes, distribution	46	"
Stephenson, lands flooded in	60	"
Tavern and Shop Licenses, Report	8	*Printed.*
Titles, Report of Master of	55	"
Toronto General Trusts Company	57	*Not printed.*
Toronto University, Auditor's Report	37	*Printed.*
do Discipline Report	38	"
do Finance Report	39	"
do positions on staff	51	*Not printed.*
do applications for professorships	75	"
do affiliation with Oxford and Cambridge	79	*Printed.*
Upper Canada College, Report	45	*Not printed.*

LIST OF SESSIONAL PAPERS.

Arranged in Numerical Order with their Titles at full length; the dates when Ordered and when presented to the Legislature; the name of the Member who moved the same, and whether Ordered to be Printed or not.

CONTENTS OF PART I.

No. 1.. Report of the Commission relating to the Ottawa Separate Schools. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 2.. Report of the Minister of Education of the year 1895, with the Statistics of 1894. Presented to the Legislature 27th February, 1896. (*Printed.*)

No. 3.. Public Accounts of the Province for the year 1895. Presented to the Legislature 17th February, 1896. (*Printed.*)

No. 4.. Estimates for the Service of the Province until after Estimates of the year are finally passed. Presented to the Legislature 18th February, 1896. (*Not printed.*) Estimates for the year 1896. Presented to the Legislature 19th February, 1896. (*Printed.*) Estimates (supplementary) for the year 1896. Presented to the Legislature 1st April, 1896. (*Printed.*)

CONTENTS OF PART II.

No. 5.. Report of the Commissioner of Crown Lands for the year 1895. Presented to the Legislature 13th March. (*Printed.*)

No. 6.. Report of the Department of Immigration for the year 1895. Presented to the Legislature 20th March, 1896. (*Printed.*)

No. 7.. Report of the Inspector of Division Courts for the year 1895. Presented to the Legislature 20th March, 1896. (*Printed.*)

No. 8.. Report on the working of the Tavern and Shop Licenses Acts for the year 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 9.. Report of the Commissioner of Public Works for the year 1895. Presented to the Legislature 20th February, 1896. (*Printed.*)

No. 10.. Report of the Inspector of Insurance and Registrar of Friendly Societies for the year 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

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No. 11.. Report upon the Lunatic and Idiot Asylums of the Province for the year ending 30th September, 1895. Presented to the Legislature 13th February, 1896. (*Printed.*)

No. 12.. Report upon the Common Goals, Prisons and Reformatories of the Province for the year ending 30th September, 1895. Presented to the Legislature 20th February, 1896. (*Printed.*)

No. 13.. Report upon the Houses of Refuge and Orphan and Magdalen Asylums of the Province for the year ending 30th September, 1895. Presented to the Legislature, 12th February, 1896. (*Printed.*)

No. 14.. Report upon the Hospitals of the Province for the year ending 30th September, 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 15.. Report upon the Institution for the Education of the Blind, Brantford, for the year ending 30th September, 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 16.. Report upon the Institution for the Education of the Deaf and Dumb, Belleville, for the year ending 30th September, 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 17.. Report of the Work under the Children's Protection Act for the year 1895. Presented to the Legislature 12th February, 1896. (*Printed.*)

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No. 18.. Report of the Ontario Agricultural College and Experimental Farm and Experimental Union for the year 1895. Presented to the Legislature 6th March, 1896. (*Printed.*)

No. 19.. Report of the Entomological Society of Ontario for the year 1895. Presented to the Legislature 23rd March, 1896. (*Printed.*)

No. 20.. Report of the Fruit Growers' Association of Ontario for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 21.. Report of the Fruit Experiment Stations of Ontario, for the year 1895. Presented to the Legislature 11th March 1896. (*Printed.*)

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No. 22.. Report of the Bee Keepers' Association of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 23.. Report of the Poultry and Pet Stock Associations of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 24.. Report of the Dairymens and Creameries' Associations of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 25.. Report of the Superintendent of Farmers' Institutes of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 26.. Report of the Sheep and Swine Breeders' Associations of the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 27... Report of the Dominion Cattle Breeders' Association of the Province for the year 1895. Presented to the Legislature 31st March, 1896. (*Printed.*)

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No. 28... Report of the Agriculture and Arts Association for the year 1895. Presented to the Legislature 31st March, 1896,

No. 29.. Report of the Inspectors of Factories for the Province for the year 1895. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 30... Report upon the Registration of Births, Marriages and Deaths in the Province for the year 1894. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 31.. Report of the Inspector of Legal Offices for the year 1895. Presented to the Legislature 20th March, 1896. (*Printed.*)

No. 32.. Report of the Commissioners for the Queen Victoria Niagara Falls Park for the year 1895. Presented to the Legislature 5th March, 1896. (*Printed.*)

No. 33.. Report of the Ontario Game and Fish Commission. Presented to the Legislature 28th February, 1896. (*Printed.*)

No. 34.. Report of the Bureau of Mines for the year 1895. Presented to the Legislature 31st March, 1896. (*Printed.*)

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No. 35.. Report of the Board of Health for the year 1895. Presented to the Legislature 19th March, 1896. (*Printed.*)

No. 36.. Report of the Bureau of Industries for the year 1895 Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 37.. Auditor's Report to the Board of Trustees on Capital and Income Account of the University of Toronto. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 38.. Report of the Commissioners on the Discipline and other matters in the University of Toronto. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 39.. Report of the Standing Committee on Finance of the University of Toronto. Presented to the Legislature 12th February, 1896. (*Printed.*)

No. 40.. Report of the Clerk in charge of the Forestry Branch, Crown Lands Department. Presented to the Legislature 31st March, 1896. (*Printed.*)

CONTENTS OF PART VIII.

No. 41.. Return from the Records of the several Elections to the Legislative Assembly in the Electoral Districts of West Algoma; the North Riding of the County of Brant, Kingston, South Wentworth and West Wellington, since the General Election of 1894, shewing: (1) The number of Votes polled for each Candidate in each Electoral District. (2) The majority whereby each successful Candidate was returned. (3) The total number of Votes polled in each District. (4) The total number of Votes remaining unpolled. (5) The number of names on the Voters' List in each District. (6) The number of Ballot Papers sent out, and how disposed of in each Polling Sub-Division. (7) The number of Tendered Ballots sent out. (8) The population of each District as shown by the last Census. Presented to the Legislature 13th February, 1896. (*Printed.*)

No. 42.. Copy of an Order in Council directing the payment out of the Surplus Surrogate fees of $115. to His Honour Judge Doyle. Presented to the Legislature, 12th February, 1896. (*Not printed.*)

No. 43.. Copy of an Order in Council increasing the commutation paid to His Honour Judge Jones. Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 44.. Copy of an Order in Council directing the payment out of the Surplus Surrogate fees of $500 to His Honour Judge Mosgrove Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 45.. Report of the Principal of Upper Canada College shewing the present attendance of pupils and also the statement of the Bursar for the year ending 30th June, 1895. Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 46.. Statement shewing distribution of Revised and Sessional Statutes for the year 1895. Presented to the Legislature 12th February, 1896. (*Not printed.*)

No. 47.. Return to an Order of the House of the Eleventh day of March, 1895, for a Return shewing the names, occupations and post office addresses of the License Commissioners of the Province for the years 1891-92-93 and 1894. Presented to the Legislature 12th February, 1896. Mr. *Ryerson.* (*Not printed.*)

No. 48.. Return to an Order of the House for the Third day of April, 1895, for a Return shewing the number of prosecutions instituted by agents or detectives of the Medical Council during the year 1894, for violations of the Medical Act, shewing the names of such prosecutors, the names of those prosecuted, the particular offence with which they were charged, and the fine or imprisonment imposed upon those persons convicted. Presented to the Legislature 12th February, 1896. Mr. *Caven.* (*Not printed.*)

No. 49.. Return to an Order of the House of the Third day of April, 1895, for a Return of copies of all applications for the purchase of the water lot in front of lot No. 15 in the 8th Concession of the Township of Dysart, in the County of Haliburton, and of all plans, petitions and correspondence relating to the issue of a patent of such water lot. Presented to the Legislature 12th February, 1896. Mr. *Carnegie.* (*Not printed.*)

No. 50.. Copies of Orders in Council relating to Educational matters approved of during the year 1895. Presented to the Legislature 13th February, 1896. (*Printed.*)

No. 51.. Return to an Order of the House of the Eleventh day of March, 1895. for a Return of copies of all letters received by the Minister of Education, and by other members of the Government, since the first day of January, 1891, recommending persons for positions on the staff of University College, and of the School of Practical Science. Presented to the Legislature 17th February, 1896. Mr. *Whitney.* (*Not printed.*)

No. 52.. Return to an Order of the House of the House of the Twenty-seventh day of March, 1895, for a Return of copies of all correspondence between any member of the Government and any person or persons referring to the establishment of a Normal School in the City of London, and a similar Return referring to the establishment of a Normal School in the Town of Woodstock. Presented to the Legislature 17th February, 1896. Mr. *Whitney.* (*Not printed.*)

No. 53.. Return to an Order of the House of the Third day of April, 1895, for a Return of copies of all correspondence between the Municipality of Sudbury and any member of the Government relating to W. A. Quiball, Police Magistrate of Sudbury. Presented to the Legislature 17th February, 1896. Mr. *Whitney.* (*Not printed.*)

No. 54.. Report of the Inspector of the Elgin House of Industry and Refuge, for the year 1895. Presented to the Legislature 18th February, 1896. (*Not printed.*)

No. 55.. Report of the Master of Titles for the year 1895. Presented to the Legislature 20th February, 1896. (*Printed.*)

No. 56.. Return to an Order of the House of the Tenth day of April, 1895, for a Return of copies of all correspondence, documents and writings, between any member of the Government, or any person or persons and the Government, in connection with the recent appointment of Mr. John W. Smith, of the Town of Brampton, as Bailiff of the First Division Court of the County of Peel, and of the dismissal of Mr. George Broddy. Presented to the Legislature, 21st February, 1896. Mr. *St. John.* (*Not printed.*)

No. 57.. Statement of the affairs of the Toronto General Trusts Company for the year 1895. Presented to the Legislature, 25th February, 1896. (*Not printed.*)

No. 58.. Return to an Order of the House of the Tenth day of April, 1895, for a Return, shewing all actions and references pending before Local Masters which have been pending for more than six months, with the dates, when the matters were brought into the Master's office, the present condition of such matters, and the reasons why same are not disposed of. Mr. *Middleton.* Presented to the Legislature, 27th February, 1896. (*Not printed.*)

No. 59.. Detailed Statement of all Bonds and Securities recorded in the Provincial Registrar's Office since the last return submitted to the Legislative Assembly upon the eighth day of March, A.D. 1895, made in accordance with the provisions of R.S.O., cap. 15. sec. 23. Presented to the Legislature, 28th February, 1896. (*Not printed.*)

No. 60.. Return to an Order of the House of the Twenty-sixth day of February, 1896, for a Return of copies of all correspondence, papers and documents, except that already brought down, between any member or officer of the Government, or any other person or persons, on the subject of claims for damages for the flooding of lands in the Township of Stevenson by the Government dam at the outlet of Mary Lake. Also, copies of all reports made by any Departmental officer, or any other person, to the Government, or any Department thereof, on the subject of such claims, or the damages occasioned by such works. Presented to the Legislature, 5th March, 1896. Mr. *Langford.* (*Not printed.*)

No. 61.. Return to an Order of the House of the Twenty-first day of February, 1896, for a Return shewing (1) the amount of stock on hand in each of the Industrial Departments of the Central Prison, at the stock taking on 30th September, 1894, and on 30th September, 1895. (2) The amount of material purchased for each of said departments during the year ending 30th September, 1895. (3) The amount of wages of all foremen and instructors employed in each of said shops during the year ending 30th September, 1895. (4) The number of days labour of prisoners detailed to each of said shops during said year, shewing the total number detailed whether employed or not. (5) The amount received, and amount still

owing for the produce of said industries sold during the year ending 30th September, 1895, and the amount received during the year ending 30th September, 1895, on account of sales previous to 30th September, 1894. Presented to the Legislature, 5th March, 1896. Mr. *Matheson.* (*Printed.*)

No. 62.. Statement of Returns forwarded to the office of the Provincial Secretary, of all fees and emoluments received by the Registrars of Deeds, for the Province of Ontario, for the year 1895, made in accordance with the provisions of 56 Victoria, cap. 21, sections 117, 120 and 121, and 57 Victoria, cap. 9, sections 6 and 7, with which are contrasted the gross amount of fees for the years 1893 and 1894. Presented to the Legislature, 6th March, 1896. (*Printed.*)

No. 63 . Copy of an Order of His Honour the Lieutenant-Governor in Council approved of the 15th day of August, 1895, approving of the Companies therein mentioned, as Security for Public Officers. Presented to the Legislature, 6th March, 1896. *Not printed.*

No. 64.. Copy of an Agreement, dated Third day of March, 1896, between the Minister of Education and the Board of Education of the City of Hamilton, affiliating the Ontario School of Pedagogy with the Hamilton Collegiate Institute. Presented to the Legislature 9th March, 1896. (*Printed.*)

No. 65.. Copy of an Agreement between the Inspector of Prisons and Public Charities and P. L. O'Connor, relative to the manufacture of binder twine at the Central Prison. Also, of Order in Council approved by His Honour the Lieutenant-Governor on the 1st day of October, 1895, authorizing the said Agreement. Presented to the Legislature 11th March, 1896. (*Printed.*)

No. 66.. Copy of an Order in Council, approved by His Honour the Lieutenant-Governor the 10th day of March, 1896, fixing the amount to be paid to His Honour Judge Elliott, Junior Judge of the County of Middlesex, out of the surplus Surrogate fees for the year 1895. Presented to the Legislature 13th March, 1896. (*Not printed.*)

No. 67.. Return to an Order of the House of the Sixth day of March, 1896, for a Return shewing the cost of the machinery, the cost of repairing and maintaining the same in order, and the cost of raw material used in connection with the manufacture of binder twine in the Central Prison, giving the aggregate amounts for each year from the beginning of the said industry to date; the amounts annually paid as commissions for the sale of the product; the cost of packages, freight, salaries of extra officials and all other expenditures incurred in connection with or occasioned by the said manufacture. The annual receipts from sales of binder twine during the said period, and the estimated value of the machinery, plant, material and stock on hand when the said industry was transferred to its present managers. Presented to the Legislature 13th March, 1896. Mr. *Haycock.* (*Printed.*)

No. 68.. Return to an Order of the House, of the Twenty fifth day of March, 1895, for a Return shewing the municipal indebtedness of the various municipalities of the Province on the 31st December, 1894, under the following heads :—

1. Roads and bridges.
2. Railway bonuses.
3. Aid to manufactures by way of bonus.
4. Municipal waterworks.
5. Waterworks belonging to companies.
6. Gas and electricity.
7. High and Public Schools.
8. Sewers.
9. Other purposes.
10. Also shewing any debenture debt for local improvements, not above included. Presented to the Legislature 23rd March, 1896. Mr. *Gibson* (*Huron.*) (*Printed.*)

No. 69.. Return to an Order of the House, of the Fourth day of March, 1896, for a Return of copies of all correspondence, documents and writings between any Member of the Government, or between any person or persons and the Government, in connection with the recent charges made by James Massie, late Warden of the Central Prison, against certain of the officials of the Prison. Also, for copies of the Commission, or other appointment, and the instructions given to the Commissioners who investigated the charges. Also, for a copy of all evidence taken before the Commissioners at the investigation, and of the report made thereon by the Commissioners. Presented to the Legislature 23rd March, 1896. Mr. *Marter.* (*Not printed.*)

No. 70.. Return to an Order of the House, of the Twenty-sixth day of February, 1896, for a Return of copies of all correspondence between any official of the Corporation of the City of Hamilton and the Department of Crown Lands, or any officer thereof, relating to any question affecting the rights of the City of Hamilton, or any person or persons, to certain portions of Burlington Beach ; also, for a copy of any instructions given to S. H. Jones, Esquire, P. L. S., as to defining the limits of any holding either leased to the City of Hamilton, or sold to any individual occupant ; also, for a copy of plan of survey made by Mr. Jones ; also, for a copy of the original, as well as the subsidiary lease, granted to the City of Hamilton by the Department of Crown Lands. Presented to the Legislature 24th March, 1896. Mr. *Dickenson.* (*Not printed.*)

No. 71... Copy of an Order in Council, approved by His Honour the Lieutenant-Governor, the 26th day of March, A.D. 1896, approving of the accompanying Agreement between the Canada Publishing Company (Limited), Publishers, of the City of Toronto, and Her Majesty the Queen, represented by the Minister of Education for the Province, on behalf of the Educational Department of Ontario, respecting the publication of "The Public School Writing Course, Vertical System," comprising seven separate books, for use in the Public Schools of Ontario. Presented to the Legislature 26th March, 1896. (*Printed.*)

No. 72.. Copy of an Order in Council, approved by His Honour the Lieutenant-Governor, the 26th day of March, A.D. 1896, approving of the accompanying Agreement between The Copp Clark Company (Limited), Publishers of the City of Toronto, and Her Majesty the Queen, represented by the Minister of Education for the Province, on behalf of the Education Department of Ontario, respecting the publication of "The High School Physical Science, Part 2." Presented to the Legislature 26th March, 1896. (*Printed.*)

No. 73.. Copy of an Order in Council, approved by His Honour the Lieutenant-Governor, the 26th day of March, A.D. 1896, approving of the accompanying Agreement between The Copp, Clark Company (Limited), The Canada Publishing Company (Limited) and The W. J. Gage Company (Limited), Publishers, of the City of Toronto, and Her Majesty the Queen, represented by the Minister of Education for the Province, on behalf of the Education Department of Ontario, respecting the publication of Public School Readers, consisting of:—The First Reader, Parts 1 and 2; the Second Reader; the Third Reader; the Fourth Reader and the High School Reader. Presented to the Legislature 26th March, 1896. (*Printed.*)

No. 74.. Return to an Order of the House of the Sixth day of March, 1896, for a Return of Copies of all agreements entered into between the Government and Hazelwood & Whalen, and the Government and G. P. Cleaner, James Whalen and others, respecting the cutting of pulp wood, or other timber, in the territory north of Lake Superior, together with copies of all correspondence in connection with the same. Presented to the Legislature 26th March, 1896. Mr. *Matheson.* (*Not printed.*)

No. 75.. Return to an Order of the House of the First day of April, 1895, for a Return of copies of all advertisements calling for applications for professorships, associate professorships and lectureships in the University of Toronto and University College since the University Federation Act went into force; also, copies of all applications for such advertised positions and of the testimonials in support thereof and in the possession of any Department of the Government; also, copies of all correspondence relating to such vacancies between the Government and any person holding official positions in connection with the management of either of the above institutions. Presented to the Legislature 30th March, 1896. Mr. *Howland.* (*Not printed.*)

No. 76.. Return to an Order of the House of the Eleventh day of March, 1896, for a Return shewing the amounts paid to Warwick Bros. & Rutter for printing and binding for the years 1894 and 1895, respectively, in terms of the agreement of 1893. Presented to the Legislature 30th March, 1896. Mr. *Meacham.* (*Not printed.*)

No. 77.. Report of the Secretary and Registrar of the Province for the year 1895. Presented to the Legislature 31st March, 1896. (*Printed.*)

No. 78.. Report of the Librarian upon the state of the Library. Presented to the Legislature 1st April, 1896. (*Printed.*)

No. 79.. Papers relating to the application of the Senate of the University of Toronto to the Universities of Oxford and Cambridge for the grant of special affiliation privileges. Presented to the Legislature 7th April, 1896. (*Printed.*)

No 80.. Return to an Order of the House of the Sixteenth day of March, 1896, for a Return shewing how many of the children in each City and County, who passed the leaving examination in 1895, are now attending the High Schools. Presented to the Legislature 7th April, 1896. Mr. *Meacham.* (*Not printed.*)

No. 81.. Return to an Order of the House of the Twenty-fifth day of March, 1896, for a Return of copies of all applications and correspondence in favour of and relating to the appointment of William Murdock as Farmer, or Assistant Farmer, at the London Asylum. Presented to the Legislature 7th April, 1896. Mr. *Whitney.* (*Not printed.*)

FIFTIETH ANNUAL REPORT

OF THE

AGRICULTURE AND ARTS ASSOCIATION

OF ONTARIO

1895.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BRO'S & RUTTER, PRINTERS, ETC., 68 AND 70 FRONT STREET WEST,
1896.

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FIFTIETH ANNUAL REPORT

OF THE

AGRICULTURE AND ARTS ASSOCIATION.

1895.

To the Honorable John Dryden, Minister of Agriculture :

I have the honor, on behalf of the Council of the Agriculture and Arts Association of Ontario, to present the Report of their proceedings for 1895, the Reports of the Shire, Hackney and Clydesdale Horse Associations for 1894, the Report of the Dominion Shorthorn Breeders' Association, the Dominion Ayrshire Breeders' Association, the Hereford Breeders' Association, the Report of the Canadian Horse Show, the Report of the Provincial Plowing Matches, the Report of the Fat Stock Show at Guelph for 1895, Report of the Provincial Dairy Show at Gananoque in 1895, a list of the graduates of the Veterinary College for 1895, and the Treasurer's statement for 1895. Also, appendix showing Prize Awards for Horses and Cattle at the Industrial Exhibition, Fat Stock Show and Provincial Dairy Show.

I have the honor to be,
Your obedient servant,

HENRY WADE,
Secretary.

TORONTO, March 31st 1896.

LIST OF OFFICERS

FOR 1895.

President, - - - - - - - - - JONATHAN SISSONS, Barrie.

Vice-President, - - - - - - - - - W. C. EDWARDS, Rockland.

Secretary, - - - - - - - - - HENRY WADE, Toronto.

Treasurer, - - - - - - - - - - DAVID KIRKWOOD, Brampton.

Directors :

Division No. 1.—D. P. MCKINNON, South Finch.

No. 2.—W. C. EDWARDS, Rockland.

No. 3.—JOSHUA LEGGE, Gananoque.

No. 4.—B. MALLORY, Frankford.

No. 5.—W. J WESTINGTON, Plainville.

No. 6.—J. C. SNELL, Snelgrove.

No. 7.—NICHOLAS AWREY, Hamilton.

No. 8.—JOHN E. COHOE, Wellandport.

No. 9.—WM. DAWSON, Vittoria.

No. 10.—JAMES ROWAND, Dunblane.

No. 11.—ROBERT MCEWEN, Byron.

No. 12.—ALBIN RAWLINGS, Forest.

No. 13.—JONATHAN SISSONS, Barrie.

FIFTIETH ANNUAL REPORT

OF THE

AGRICULTURE AND ARTS ASSOCIATION

OF ONTARIO.

ANNUAL MEETING.

The annual meeting of the Agriculture and Arts Association of Ontario was held in the Parliament Buildings, Toronto, on 7th March, 1895, beginning at two o'clock p.m.

The President, Mr. WILLIAM DAWSON, occupied the chair. Among the members present there were: N. Awrey, M.P.P., Hamilton; J. C. Snell, Snelgrove; W. C. Edwards, M.P., Rockland; D. P. McKinnon, South Finch; Joshua Legge, Gananoque; Albin Rawlings, Forest; John E. Cohoe, Wellandport; Jonathan Sissons, Crown Hill; B. Mallory, Frankford; Henry Wade, Secretary, Toronto.

The minutes of the last annual meeting were read and confirmed by the meeting.

The Secretary read a communication from Mr. C. C. James, Deputy Minister of Agriculture, giving the result of the election of members to the Association Board as follows:

For No. 5 District, W. J. WESTINGTON, Plainville.
" 6 " J. C. SNELL, Snelgrove.
" 7 " N. AWREY, Hamilton.
" 8 " JOHN E. COHOE, Wellandport.

Mr. Jamieson appeared before the Board in reference to the Agriculture and Arts buildings destroyed by fire and his lease of same, when Mr. Rawlings moved, seconded by Mr. Legge, and it was adopted, that Mr. Jamieson be heard the following morning.

REPORT OF SECRETARY FOR 1894.

The Secretary, Mr. HENRY WADE, then read his report, as follows:

GENTLEMEN,—As has been my custom, since being your Secretary, I prepared a careful and detailed report of the business transacted by this Association during the past year, but it was my luck to have it burnt on Sunday morning in our headquarters at the corner of Queen and Yonge streets, where since 1862 the business of this Association has been transacted, and where we had collected in the thirty-three years a mass of agricultural information, in the shape of bound copies of all the agricultural periodicals that have been published in Canada, as well as a number from England and the United States; in fact, a complete reference library in that line. We had also destroyed, the most complete agricultural library in the Province, mostly procured in England some thirty years ago by Prof. Buckland, then Secretary of this Association, and which had been added to from time to time. In this library was a complete set of the report of the Royal Agricultural Society of Great Britain, and of the Highland Society of Scotland; also a complete set of the English Short Horn Herd Book and one of the American Short

Horn Association, each containing forty volumes; a set of Hereford Herd Books from both Scotland and the United States; sets of Ayrshire and Devon Books; seven complete sets of Swine Records from the States and from England, as well as Hackney, Clydesdale, Shire and Thoroughbred horse stud books. These were all exchanges used for references. Besides these were lost all that was left of the old Canadian and British American Short Horn Books that had no commercial value. We also lost all that were left of the four volumes of the Swine Record, viz., about 300 of Volume Four, 250 of Volume Three, and 150 of Volume Two; Volume One being all sold. This will necessitate the reprinting of at least Volumes Three and Four to supply members of the Swine Breeders' Association. We also lost all we had left of the Ayrshire Herd Book, the Second Volume of which was issued only in 1894. It will also be necessary to reprint these. But the worst loss is the unprinted manuscript, a large volume of Devon pedigrees and a lot of Polled Angus and Herefords, being the collection of years, of which there was not sufficient to make a volume. In addition to the above were all the registrations of swine, cattle and horses, taken in 1894.

The only way to get the information in order to print these volumes is to ask the breeders by letter and circular to send in the original pedigrees sent to them, for us to copy. I am afraid it will be a slow and tedious undertaking to collect it all, but we must try. As far as the Clydesdale Stud Books are concerned, we have a sufficiency of unbound volumes at the printer's to last us for a great many years, and I have already ordered fifty copies to be bound in readiness for orders. Even our office copies, with all our notes and corrections, were lost, and much of the information gathered can never be replaced. We also lost all the vouchers that had been in the possession of the late treasurer at Brampton.

The building was erected in 1861 and completed in 1862, thirty-three years ago. From what information I can glean it cost about $15,000 to build, and the land, forty feet by eighty, cost $30 per foot. At that time building material and labor were much cheaper than they are to-day. The lot was paid for out of funds on hand, the savings from provincial exhibitions of that time, when it was the only great show of the day.

The Association had not enough funds to pay for all the building at that time, so Mr. Jas. Fleming, the then seedsman of the Association, advanced sufficient funds to complete it, and in time got recouped by renting all the lower story for a wholesale seed store, and getting back the amount owing him in this way.

Some ten or twelve years ago the Ontario Government, wanting office room for the Agricultural Department, spent over $10,000 more in readjusting the building. Since then the tenant, Mr. Jamieson, has also spent a large sum in remodelling the lower story. The only thing wanting in the offices was a vault to hold our valuable papers and books, the safe not being large enough to hold many of them, and so they have disappeared in flames and are now in ashes.

Our insurances on the building are as follows: $5,000 in the North Union Fire Insurance Association; $5,000 in the North British and Mercantile; $2,500 on books and furniture; total, $12,500.

Registration.

Our registrations in 1894 were, as near as I can remember from the report made up before the fire, 196 horses, 821 cattle and 3,447 swine, against, in 1893, 268 horses, 791 cattle and 2,838 swine. The fees collected were $2,617.25, and the herd books sold amounted to $684.08, or a total of $3,301.33 against $3,273.68 in 1893, a slight increase.

The Eighth Annual Spring Horse Show For 1894

Was again held in the old drill shed on March 28th and 29th, under the auspices of the Agriculture and Arts Association and the Clydesdale, Shire, and Hackney Associations. It was again very successful. It cost in prizes and expenses $1,828.05, and we received in special grants and fees $615.25, leaving the Association to make up $1,212.80.

Eleventh Provincial Fat Stock Show.

This was again held in the Victoria Rink, in the city of Guelph, and was a great success as far as exhibits were concerned. We paid out $3,018.13 in prizes and expenses, and received in special grants and gate receipts $1,689.20, leaving the amount of $1,328 93 to be paid up by this Association.

Plowing Matches.

Only three of these were held in 1894, one at Hagerman's Corners, in Markham, one in Mr. Rawling's district, and one in Mr. McKinnon's district. They were all well attended and popular.

Ontario Veterinary College.

This institution granted 158 diplomas to students who graduated during the year at this College, A. Smith, V. S. R., V. S. E., Principal. We presented three silver medals to the students. The total expenses to the Association were $101 for diplomas, etc.

The various live stock associations in affiliation with the Agriculture and Arts Association, such as the Clydesdale, Shire, and Hackney Associations, the Dominion Shorthorn, Ayrshire, and Hereford Cattle Associations, held their annual meetings in the month of February, and were all fairly well attended.

Office Work.

Our staff have been constantly employed in correcting proofs of herd and swine records; have completed the third volume of the Swine Record, and second volume of the Ayreshire, and have printed the fourth volume of the Swine Record during the year, and have issued certificates for all the animals recorded, as well as sending out about 6,000 letters and post cards. This, together with the work of compiling two prize lists, and two catalogues of exhibits, has kept your Secretary and his staff in full employment.

All of which is respectfully submitted.

It was moved by Mr. Awrey, seconded by Mr. Snell, and carried, that the Secretary's report be adopted.

CONFERENCE WITH THE MINISTER OF AGRICULTURE.

At the request of Mr. Awrey, the Honorable Mr. Dryden then interviewed the Board.

Hon. Mr. Dryden: There has been a good deal of discussion about the proprietory of abolishing this Board, it has been off and on for years, as you all know. It is discussed amongst members of the Legislature and exhibitors. Personally, I feel a little troubled at being forced to undertake to dissolve this institution, but at the same time I have felt for a long time if anybody made an attack on it I would scarcely know how to defend it. It is a cumbersome Board, as you know, and the constitution is such that it makes the meetings rather expensive for the work you have to do. I believe that the gentlemen that compose this Board have devoted themselves earnestly to trying to accomplish something useful for the country, but with the other organizations working on the same lines it is difficult to find anything that would be appropriate for you to undertake. Under those circumstances, if one raised the question of whether the money that is being spent in this direction is well expended, and whether or not it cannot be expended in some other direction to better advantage, I do not know that you can give an affirmative answer. Perhaps the gentlemen composing the Board might, but I would be troubled, at all events, to do so. Then the burning of the building has brought things

to a climax sooner than otherwise, and we will have to settle what we will do in the future, in order to deal with matters now. If the Board is dissolved, then the question arises how shall the work, which cannot very well be laid aside, as to registrations and so on, be carried on. Whether or not it would be desirable, if this Board were dissolved, to endeavor to have another Board of a different character, to take charge of some of the work that you now do is another point.

These are questions that have been very much discussed, and in reference to the whole matter, no definite conclusion has been reached by the Government, or anybody, as far as I know.

If Mr. Wade were to continue to take charge of the registration work, it would only be, I presume, under the same circumstances as now. He does it now as an officer of this Board, but under the control and guidance of the various Associations for whom he does the work. I do not know why that could not be continued in the future. I think it must be done. I do not think the Government, or Legislature, or anybody, could undertake to throw this whole thing away. It would not be fair to those various associations for whom you have undertaken to do that work, and yet it is not the proper thing for this large Board to be gathered together, and to be elected annually, representing different districts, to accomplish that work alone.

You only have three other things just now to occupy your attention, the horse show, the plowing matches and the fat stock show. It might be very easy to carry on that work without this Board.

Mr. Awrey: The Department of Agriculture could not very well take charge of the Spring Stallion Show. There would have to be some scheme to carry on this work.

Mr. Edwards: Would it be a good suggestion to reduce the representation very largely of this Board, and make it a smaller institution? How would that do, make it a sort of advisory Board.

The Hon. Mr. Dryden: There is a good deal of difference of opinion. People from different parts of the country come and say this Fat Stock Show, held in Guelph, is a local thing. So it is largely. Propositions come in that it should go from place to place, and I am not sure but what the contention is good that it should. You have got the local organizations in different parts of the country, and I have had delegates from some of these to give them grants now, and my answer has always been, the Government policy is not to give grants to local organizations, and that the only grants were give to organizations of a Provincial character. We have felt that we were justified in giving a grant to this. Nevertheless it is true, when you come to work it out in practice, that the show is more or less local.

Mr. Awrey: Would there be any success in holding a fat stock show in the east?

The Hon. Mr. Dryden: Probably you might hold a fat stock show in a place like Woodstock or London, and you might go east as far as Port Hope or Cobourg, but I think to go into a dairy district with a fat stock show would perhaps be an absurdity. I understand that the claim to holding a dairy show down east has just been upon that ground. They say you are spending money in the west in something we have no interest in whatever; we want something in the east to match it. It is very easy to spend money in that way, but the question is whether the money is spent in the best interests of agriculture I do not see that money spent in that way on what you would call a dairy show would accomplish very much more than you are accomplishing now. It would simply add to the prize list of some town or agricultural society in the eastern district. You would not have many more people to see it, and would not accomplish much more in the way of education than what you are doing now. The whole thing is surrounded with more or less difficulty, and the Board should settle whether spending this money is accomplishing the good we desire. If it is not should we continue in this line? Should we not map out for ourselves something that is more advantageous? These are the questions I have to face in my position.

Mr. Awrey: While I quite agree with Mr. Dryden that this Board is too expensive, too large altogether, at the same time I think that Mr. Dryden would find that he would

be preplexed and annoyed almost beyond measure if there was not some provincial institution that had charge of shows, by applications from local shows in every part of this Province for grants, in the fat stock line, dairying and everything else. I think we have been a sort of buttress against that sort of thing. He could say, we are not in the show business, we give a certain grant to a certain body which is Provincial in its character, and it is supposed to have charge of this work. I think that this Board, composed of thirteen members, is perhaps too large to do the work we are doing now, but to abolish altogether the corporation and not have something—an advisory board in connection with fat stock shows and spring shows—would give rise to much trouble. Suppose the Board were abolished, and an application made to the Department of Agriculture for a grant to hold a spring show in Toronto, that action would be criticised with a great deal of keenness by the representatives from the different parts of the Province, when in our estimates and public accounts appears a grant of $1,000 for a spring show in the city of Toronto. It would give rise to this that the Department would be asked to give something towards London Show as an equivalent, or something towards an exhibition in Kingston or Ottawa ; but if the Department had a small provincial board, composed of not more than four members, to whom grants could be made for show purposes, under the direction of the Department of Agriculture, it would stop all that difficuly. The question is this, are not fat stock shows valuable to the Province ? I think they are. And is the Spring Stallion Show of advantage to the Province ? If it is it should be Provincial in character, or otherwise we shall have to give grants to almost every small show. I think Mr. Dryden will have to submit to a great deal of criticism if he continues this Board in existence with thirteen members.

Mr. Rawlings : A number of the counties have the idea if this Association is done away with they would receive the grant.

The Hon. Mr. Dryden : I have never entertained that idea, nor have I given them the slightest encouragement to think so. What I have always said is if this institution is not carrying out the objects for which it was originally incorporated, that the time is past for it. What you are going to do with the money you are now giving to them is another thing. My opinion is this Province is giving just as much to agricultural societies as it can afford to.

Mr. Snell : You could have a Provincial Board that would embrace all the live stock associations ?

Hon. Mr. Dryden : Yes. How are you going to constitute the Board ? I do not believe the Legislature would allow us to appoint a Board.

Mr. Awrey : I think a very fair way would be, and I do not think the Legislature would object, to appoint say two men by the Government that really would be representative of the Government and to whom the Minister of Agriculture could at all times impress very strongly views of what particular line of action should be adopted, and associated with these two men would be the presidents of the different live stock associations—those of a certain standing.

Mr. Edwards : If some sort of an organization is to be kept up would not it be better after all to consider the question of reducing the size of the Board ? It is thirteen to-day. Say reduce it to four and let the different districts elect them. I wish to act in the agricultural interests of the Province, and I think this Board is too large and expensive and some different arrangement may be made, but if you abolish it altogether you have to get up some other arrangement. If it was reduced to reasonable proportions I do not see why it should be attacked at all. I am not arguing now with the idea of perpetuating the Board, but discussing the advisability of doing away with it or reducing it.

The Hon. Mr. Dryden : With a Cattle Breeders' Association on the same lines as we have Sheep Breeders' and Swine Breeders' there would be no difficulty in holding a fat stock show as now.

Mr. Awrey : The Province gave $4,600 to the Board, but the Board gave back to the people of this Province in prize money very nearly the full amount of every dollar

that the Government gave to it. Practically if it did not give the money—the prizes—it could be self-sustaining. It had its receipts from registrations, and then from renting the building. If the property were sold it would make about the same in interest as we had from the rents. But here is where the difficulty comes in. Out of that $4,600 the expenses of the Board were pretty nearly one-quarter of the full amount. Now, I think none of us can disguise from ourselves the fact that the Board is too large and expensive. Personally I do not think Mr. Dryden has any desire to abolish the Board, if it was not on acccunt of public sentiment.

Hon. Mr. Dryden: That is it, certainly.

Mr. Awrey: And I venture to say that Mr. Dryden, if it were not for adverse criticism, would be quite willing to go on with the Board as it is.

THE FAT STOCK SHOW.

Mr. Hobson: I represent the Fat Stock Club of Guelph and wish to speak to the Board in reference to holding the Fat Stock Show there. I telegraphed the Mayor to come down, but he got the message too late to be here. He telegraphed me saying they would provide all the accommodation similar to what they have done in previous years, that is, as far as the city is concerned. The Association may rely upon the same terms being carried out. I have no special instructions from our Fat Stock Club; I expect the President down. We will do the same as we have always done, put forth our best efforts to assist you. There is no use in my promising a large amount of money, for our balance is gradually getting smaller; but if you see fit to hold your show there next year we will do our best to carry it out successfully.

TEMPORARY QUARTERS.

President Dawson: I think something should be done about the quarters our Secretary is to occupy in the meantime.

Secretary Wade: The rent is $20 for the room where I am now.

It was moved by Mr. Edwards, seconded by Mr. Snell, and resolved, that Mr. Wade be authorized to secure temporary offices, paying therefore at the rate of not more than $20 a month, until instructions are given by this Board to remove to some more prominent location; also that he be authorized to purchase one typewriting machine for the use of this Association upon the best terms possible, as well as all necessary stationery to conduct the affairs of the Agriculture and Arts Association.

Moved by Mr. Awrey, seconded by Mr. Snell, and carried, that the meeting adjourn to meet again at 10 o'clock a.m., 8th March, 1895. Carried.

The meeting resumed at 10 o'clock a.m. on 8th March, the President, Wm. Dawson, in the chair. The same members were present.

Mr. Legge: At the last meeting of the Board we heard from Mr. Macpherson in reference to some ideas that he wished us to endorse, and we invited him to meet us at this meeting and give us the details of the scheme he proposed. I move Mr. Macpherson be heard before the Association. The motion was seconded by Mr. Awrey and carried.

HOW TO MAKE GENERAL FARMING PAY.

Mr. D. M. Macpherson, on being introduced to the Board, said: I have much pleasure in meeting with you and discussing the merits of certain proposed schemes which would be of great advantage to this country. I have for some time been applying myself to discover if possible how it is possible to make general farming pay in the different lines of work as we find it naturally adapted to this country.

I have found from my experience that as ordinarily conducted, farming has not paid. I have found also from observation that many of our young men, from their experience on the farm, from the age of fifteen up to twenty-three, or thereabouts, have found that from year to year the results of their yearly work was unprofitable. I will not take long, and I will ask your close attention, because it is new work and it requires very close reasoning.

The experience of young men and even older farmers, throughout the length and breadth of this country is that as each year passes along it is found that the cash proceeds are less, and that the prospect of realizing a competency, or even a fair living, becomes less. This being a fact, we find that a great many of the ambitious young men of the country are leaving the farm and starting out to other places to try and find a livelihood other than on the farm. This was one of the observations I found which urged me to look into this question and see if something could not be done to change its course.

We find also in regard to the older farmers that the results of their work in the past have been that land is being gradually reduced in fertility, that crops are being gradually reduced in amount, that the results from a day's work are gradually reduced in value, that the product per acre and the profit per acre on their entire farm for the average in the year are gradually being reduced, that the value of the land also from that very fact is found to be reduced from year to year; and it is quite a considerable amount in a decade, as we find from the results of experience.

Now if this be so, it is a deplorable condition. Our future prospects are not bright, and therefore each and every one of us should look into this question and discover if possible whether a remedy can be effected.

In trying to solve this question for the last ten, fifteen or twenty years in every conceivable way to bring about a different result, I believe that within the last three years I have discovered the true solution of the problem, and I believe it to be one which is workable throughout this Province. The effect of this plan would be to enchance the value of the land, to increase the results of the day's work in cash, to stop the exodus of young men from the rural sections, and to build up our country in prosperity, in intelligence, and in everything that is necessary to make our country great. When we put agriculture on a prosperous basis, and when the farmers of our country have in their possession ample means and a surplus profit from their work, it enables them to give their children that amount of education which is necessary at this time to hold their own in the sharp competition for existence. This is a broad question, and any effort to explain it to you in all its details, will be almost impossible; and I shall only take a few minutes perhaps by way of illustration, and give you in detail what I believe is the correct method to proceed to develop this plan throughout the land.

I proposed to the Hon. John Dryden last fall that I would be willing to make a public demonstration of what could be done with a poor farm and a poor farmer. I said that if he or the Government would advance thirty dollars per acre, I would take a poor farm and a poor farmer, and I would undertake to pay back principal and interest; to build a public road in proportion to the size of the farm, which is about five acres of public road to every one hundred acres in our country, building it on the most permanent basis, laying a foundation of broken stone and covering it with fine sand or gravel; to build up the farm and pay back as I said before principle and interest, and leave a value on the farm of double the amount I started with. I would give my personal security, and would guarantee to do all that in ten years. When I made that proposal to the Hon. John Dryden it astonished him, of course, and he could hardly credit that such a thing could

be done. He made this statement, that he could not see it possible from his own personal experience for the last two or three years. It was not possible to make his own farm pay at present, and he asked me how I could possibly make such a result, with the present prices and present condition of things. I replied to him just in the way I desire to reply to you to day. We have been sending men over the Province, surfeiting the minds of the farmers regarding improving and developing our agricultural interests, and the result is that farmers to-day are more perplexed and confused in their ideas as to how and where to begin in a proper system of improvement than ever before. They are convinced of the fact that it is necessary to make a change, but when you ask them, why don't you make a change? they say, we do not know where or how to begin. How are we to overcome this difficulty? By a practical lesson. By taking a poor farmer, under adverse conditions—the most unliklely farmer who would make a success in any township or county in our land—and demonstrating to that farmer how he can make his farm pay. There is nothing that will convince the farmer more than to show him practically where to begin and how to do it. It would encourage the young men to see an indifferent farmer under improved methods earning two dollars a day by his work instead of fifty cents a day as he now receives. Whether it be through this Association, whether it be through the Government of this Province, or whether it be through my own private enterprise, I intend to show the public that two dollars a day can be realized for the day's work in the entire year, and at the same time the value of the land be added to. The only way to do this in this country is to establish object lessons. One farm in one township should be selected. Then gradually, if possible, make every farmer of that township a model farmer, a successful farmer. Then extend that to the neighboring county. Take one county, or if you like take one township in a county, or take one township in several counties. If you can establish the fact that one indifferent farmer can change his earnings from fifty cents a day to two dollars, and can change the value of his land from say $30 to $60 an acre, it will be like a great fire in a city like this—it will go on and you cannot stop it. It will go through the whole country and extend to every farmer. Now, we have plenty of model farms to-day. What are they? They are expensive farms. Model farms which are necessary to educate the people, to develop new experiments, are necesarily expensive. But what do we find that the young men are taught there? They are taught science and they are taught practice. These young men often prove a failure. Why? Because they are not able to utilize their knowledge to the best advantage in making it profitable. What we want instead of more model farms in this country is more model farmers. What do we want when we say model farmers? When a man makes his business a success, when he realizes a profit from the work on his farm, when he builds up the fertility of the land, when he increases the value of the land from year to year when he can get a competency for himself and can educate his family, then we may say he is a model framer, and not till then. That farmer who cannot build his farm up, who goes into debt from year to year, who reduces the value of his land yearly, is a poor farmer and a failure. What we want are model farmers—no more model farms but model farmers—and when you have farmers who can produce these results don't be afraid of the farms The farms will be governed by intellect, and then you will have the result.

I will give you a few illustrations of how this is attained. After a great deal of study of the question I find that in order to produce these results successfully, making the maxium of results with the minimum cost, three things are required. First, a through acquaintance with agricultural science, which means a knowledge of the requirements of animal life, and also a knowledge of the needs of plant life, and of the transition from one stage to another, which means a knowledge of the component parts of soil and foods. In the second place it requires a business knowledge as to how to utilize that science. And what more? It requires a practical knowledge of how to utilize both science and business calculation so as to produce the greatest amount of money with the lowest cost of production.

It is a scientific fact that similar constituents enter into the composition of plant and animal life, only in relatively different proportions. Let me give you an illustration in regard to milk, which is a common substance that we are all familiar with. 100

pounds of milk contain the same constitutents as 100 pounds of green grass, relatively; or the same constituents as a bran ration for a cow for a day; or the same constituents as 100 pounds of stable manure. I might also add that five pounds of cottonseed meal and ten pounds of bran together, have the same constituents as 100 pounds of milk. It is a scientific fact that with some slight variations the material is almost precisely alike in those four cases. It may be a fact seemingly of not much importance, but let us apply it to a business calculation and see of what importance it is. Taking the value of these different articles, we find that we can buy the constituents of 100 pounds of milk in stable manure for five or ten cents; and we can buy the constituents of 100 pounds of milk in different classes of food, cottonseed meal, oil cake all kinds, bran, oats, etc., for about ten cents. We find that we can sell 100 pounds of milk for from eighty cents to a dollar. Now, we find that we can transpose 100 pounds of stable manure into 100 pounds of milk, the manure costing ten cents, and the milk selling for eighty cents or a dollar. These are facts which can be proved by actual results. The next question comes in, "What does it cost to create the transition of ten cents worth of manure into eighty cents to a dollar's worth of milk?" I find the actual cost is extremely varied. It runs from twenty cents to a dollar. The average in this country costs from sixty to eighty cents. There are a few men who are gradually getting down to sixty and fifty cents. But what is the lowest possible cost, by utilizing the best of practice and the best requirements in making this transition? It can be done from fifteen to twenty cents, and I wish to prove to the farmers of this country that it can be done and will be done, and I am doing it now, making that transition of ten cents' worth of material with twenty cents worth of labor, counting labor at seventy five cents to a dollar a day and interest at six per cent. on capital, milk worth eighty cents to a dollar. Now, if this can be done for twenty cents to thirty cents instead of from fifty cents to a dollar, the farmers of this country should know it, and the sooner they know it the better for themselves and the country.

How are we going to show that to the farmers? I have been preaching this for the last ten years to the farmers in the east, but in many sections outside of my own they are more confused to-day than ever. In the east however, where I have tried for the last three years to demonstrate these results, they are are just beginning to see the force of example in that way by my object lesson.

I was invited to address the farmers of the State of Vermont, last January, at the leading farmers' meetings of the year. I always like to give a home argument, and in travelling down through the State to White River Junction I met several farmers going there. There were over 1,000 people at the meeting. I was enquiring from them their line of trade and their special production, and trying to get all the information possible. I found that dairying was their leading business, and that they largely dealt in cattle. The farmers in the middle of the State went north and bought cows and took them home, and perhaps kept them for a year or two or only a month or two, and then sold them to the farmers south at an advance from one to five dollars, in the meantime utilizing those cows in the production of butter and cheese and they thought they did well. They believed they were making a splendid investment if they got $5 advance on their original investment, buying ten up to eighty cows at a time. I gave them an illustration like this: I said "I presume you are all dealers in cattle and you are quite pleased to make $5 a head on your different sales of cattle from one section of the country to another. Now, if you could make $30 a head on your cattle, and repeat that every year instead of probably every year or two years, you would all be in the business." Well, they all, of course, thought it would be a profitable business. "Now," I said, "if you can buy cows to day in the northern part of your State for $5, and if you put on $10 expense on them, making $15, and sell those cows for $500 every year and repeat that every year you would all stay in the business and be wealthy in a few years." I then told them they had the opportunity of doing that and receiving the full benefit. I illustrated it by taking the case of two cows in the stable both weighing the same, say 1,000 pounds, one of which drops dead. The live cow has the same constituents as the dead cow; the only difference is life. On the other side of this dead cow was 500 pounds of mixed feed,

whatever it might be at the cheapest cost, worth say $5, and alongside of that 5,000 pounds of stable manure. On the other side of this live cow was 5,000 pounds of milk. Now here we have 5,000 pounds of milk, 1,000 pounds of live cow, 1,000 pounds of dead cow, 500 pounds of beef and 5,000 pounds of stable manure, all alongside of each other, all different in form, all different in looks, all different in size, while all have the same constituents. Now 5,000 pounds of milk has the same constituents as 1,000 pounds of live cow, or 1,000 pounds of dead cow, or 500 pounds of feed, or 5,000 pounds of stable manure—the question is, if that is a fact, what good is it to know it? Let us see if we can make anything out of that fact. I find I can buy the 5,000 pounds of stable manure for about $5. I can buy the 500 pounds of mixed feed for $5. I find that the value of 5,000 pounds of milk is worth $50. It is your duty to take that 5,000 pounds of stable manure and convert it into 5,000 of milk. You can take 500 pounds of feed and convert it into 5,000 manure. What is the cost of transferring that 500 pounds of feed into 5,000 pounds of milk? It can be done to-day for $10, and I wish to have an opportunity of proving to the farmers of this country that it can be done for that and perhaps for less eventually. You can take the $5 worth of manure with $10 worth of labor and sell that for $50 or $40, as the case may be, or even $30. Making the milk sixty or seventy cents a hundred, you have 100 per cent. on the transaction. That is the business phase, that I wish to illustrate, in the case of a farm at the present time, properly conducted. This 500 pounds of feed or 5,000 pounds of stable manure for $10 worth of cost is turned into 5,000 pounds of milk. You can take that 5,000 pounds of milk and transfer it into a 1,000 pound steer. A 1,000 pound steer has almost the same constituents as 5,000 pounds of milk, and if you can transfer that milk into a steer, and sell that steer for say $40 at four cents a pound live weight, you can easily see that with $10 of expense, there is a good profit. I said to those men down there, "If you can repeat that from time to time your profits are assured. What would be the result? You would earn thereby $2 a day instead of fifty cents. You would earn an increased profit by an increased product from your soil, and by reducing the cost of production you increase the profits and by increasing the profits you increase your prosperity. And it goes on. Why? Because the laws of nature are at your back, which are ever truthful and sure as to results." Our farmers must understand the laws of nature, and apply them in business calculations, and they will then have a profit. They will have a reserve in their pockets at the end of the year when all their bills and debts are paid. Until something is devised in this way and something that will encourage the farmers, the future prospect of the farmers of this country is dismal indeed. And something must be done. I have found from observation for the last number of years that the work of this Board has been gradually passing away. Thinking perhaps that some revival could be made in the important work of this Association, I made the proposal which you find in two letters in your report, and if the members of this Association wish to bring this before the farmers of this country, and wish to bring these important manures into practical issue, I will give them the benefit of my long experience and skill, and they can have the full benefit and credit of performing that work, because I do not personally wish to have any credit. I am willing to put in my skill to carry it out for the benefit of the Association and our country.

A conflagration occurred a few days ago, which will, perhaps, change the entire prospects of the Association. The land upon which your building stood is still worth say $40,000. You will, perhaps, receive from three to four per cent. on this amount. Now, if that money were invested in a few practical demonstrations throughout this Province in developing and producing the results I propose, even if not so successfully as I expect, would still be worth millions to this country. Let me give you an illustration in this connection of the increased value.

In my county, Glengarry, which I represent, I find in a year there is just about one million days' work employed on the farms. I find that the cash crop, or results of that million day's work, is just about one-half million of dollars, which is the average of the last number of years. I find, also, that there is a deterioration going on continually, and if it be possible to change the number of days to two million by this system, it implies just double the number of days' work on the farm, I can make the return one dollar a day instead of fifty cents. What does that make the cash crop of the year? Instead of

$500,000 we have $2,000,000 representing a crop for the year. Compare half-a-million with two millions in our single county—compare with that the increased value of the land enhanced by this production. Why, it means just exactly $10 an acre. There are 200,000 acres in this county, multiply that by $10 alone, and you have $2,000,000 more. Increase this to two dollars a day, and you have $4,000,000 as a cash crop, and if you have done that you increase the value of the land some $30, $40 and $50 an acre, and when you multiply that by the acreage of one county it goes into millions. When you look forward into the future and see the prosperity of our people, the young men remaining in our county, and the improved education of our young people by reason of this prosperity, you must realize in your own minds the advantages our county would have. It would go by bounds and leaps into prosperity, and if this can be extended through all this Province, why, where would we be in a few years? It is, perhaps, too glowing an illustration, and I only give it as a prospective one. You cannot move the public by bounds and jumps in that way; it will take years and years. But what I wish to impress upon the minds of the Board is the importance of starting something as early as possible, and of starting right. If we never start along the way we know to be necessary, we will never attain to anything. But by starting on the right road we can go on, even if it be slowly, and in the end we will receive the reward of our labor. It was with this object and desire that I wished to have an opportunity of placing the matter thus before the members of this Board. I will not take up any more of your time. If it is the wish of this Board that something should be done in that way, I am quite willing to undertake it. I might say in connection with this matter, that having received the reply of your Board, being very desirous of not letting a year to go by without something being done, I took upon myself to invest my own funds, to see if something could not be done. Last December I arranged with a young man in our section, who has a two-hundred-acre farm, left to him some twenty years ago by his father, who was a very practical farmer, and one of the best farmers in the county. It was provided, however, that the son should pay certain allowances to the members of the family, and in order to do this, he had to mortgage the farm to the extent of nearly $3,000. A large family of young children, poor crops, low prices, large doctor's bills, and the unfavorable conditions gradually increased his indebtedness to about $5,000. He came to me discouraged, telling me he did not know what to do. He was very downcast. He was afraid he would lose his farm in a very few years, and asked my advice. I told him I wanted an opportunity, and that I had taken upon myself the striving to start a public demonstration. I had written to the Honorable, the Minister of Agriculture of Quebec Province, telling him I would give my personal guarantee that I would prove these results. I had written to the Minister of Agriculture for the Province of Ontario about the same thing, and to the Agriculture and Arts Association, and though I had received no definite encouragement to make a public demonstration, if he would put in his farm, implements, stock, everything that he had, I would give him enough of capital, and give him the benefit of my skill, and go on joint account, and I would expect in ten years to give him a free farm double its value in that time. I arranged from the first of Janaury, and am now working this farm, having that aim and object; to give him a free farm at the end of ten years, and give him a farm worth double what it is to-day, $6,000 or $7,000, bringing it up to $12,000 to $15,000. This will be, perhaps, the very severest test I have undertaken, but I am going to give it the most careful attention, and I shall strive, if possible, to produce these results. Although this is perhaps a private undertaking, I intend to make it a public undertaking. I intend, if I am spared, and it proves a success, to lay before the Government of this Province, and before the farmers, a scheme that will enable every farmer of this Province, or any other part of the country, to partake of the same advantage, and realize an enhanced profit. Not that I expect in the near future that we are going to receive the same prices, or that at the present time we can figure out the results in the future; but as figured out now we have a margin of fifty to one hundred per cent. We can liberally discount that, and still make a margin.

I have presented these views before you without having arranged them in detail. I have given them to you as they come to my mind, and they are not, perhaps, in the way I

would like. I am very glad to have had this opportunity of presenting a few of my ideas to this Board.

Mr. AWREY: There is one question I would like to ask you, Mr. Macpherson: How much capital did you invest with this young man?

Mr. MACPHERSON: About $3,000. My idea is that it will produce the same for four things: dairy, beef, fruit and market garden. It would not be advisable for all to go in for the same thing. We must sub-divide the profit of our country as much as possible, in regard to all the products natural to our soil and so as to realize a fair price. If we all go into one thing, we will depress the market in that. The idea should be to study out the environments of each section, and with this studied out, to lay down a plan of work. It is just the same as building a house or barn, the better the plan the better the building. The better the plan of work on the farm, the better the results; so every farm must be distinctly planned out for itself. There are general principles that must be looked into and must be relied on, but there are other calculations that must be figured on that are individual to every farm and every section of the country. I find it will take in permanent improvements and capital about $30 an acre. It takes about $20 an acre for permanent improvements, and about $10 an acre for working capital. The whole point is sufficient capital and sufficient skill. The farmers of our country must be helped. But instead of the Government or private individuals *lecturing* the farmers, we should *show* them. They now know it is necessary to do something, and they are willing and would like to do something, but the more we lecture them the more they are puzzled and confused. We want this science and skill given to the farmers. With these united you will rescue the farmer out of his hole of difficulty, and you will put him on the road to prosperity. If it can be done, it should be done immediately, and the sooner the better. Time is important and valuable. The young men look forward and think there is plenty of time in the future; but let the old men look back and they find the years of their life are very short indeed, and hence time is valuable.

Mr. LEGGE: Can you show these results? You have had some experience.

Mr. MACPHERSON: I might tell you what I did in a small way three years ago, believing something could be done with an ordinary poor farmer. I was closing out the business of the year in one of my factories and I generally give the people a short lecture of half an hour or an hour, and I was telling those men something must be done. It was a very poor section, and they were in very poor circumstances and the land was poor. I told them they had to starve or get out, or improve their condition somehow. The thought came over me at the moment that to any young man I would make this offer. If he wished to make a change in his line of work I would help him, by giving him the capital and directing him. Nobody said a word until I was through when I made this offer, when one man came up. He was not a young man—probably he was forty or forty-five years of age—a very indifferent, poor, miserable man, who had only fifty acres of land, and I knew him to be intemperate in his habits and a very poor character. He said "I will accept your offer." "Well," I said "I have not promised to help a man of your character and ambition. You are not steady, and do not work, you do not mind your business. Your conditions are unfavorable." He said, "It means more to me than my neighbor who has two hundred or three hundred acres. I have only a small farm and I will starve or I must get out. I think what you say is true, and I think I can make something and I would like to help my family, to educate them and to have a comfortable home." Well, I saw a spark of manliness in the man, although he was very indifferent, and perhaps the most unlikely man within one hundred miles. All the neighbors will tell you that. Even the neighbors, after I had promised to help him, jeered me, that I would never see a dollar, that it was like throwing my money away. However, I began to reason in this way: I said, "If you will agree to set right down to business and give up drink, and be a man I will help you." I thought if it is a failure, on account of it being a small farm it would be less loss, and if it was a success it would be all the greater on account of the character of the man. "Well," he says, "write down whatever you like and I will sign it." The man had nothing to lose and every chance to gain. I wrote out an iron-clad agreement. I advanced him $1,800,

built him a stable, gave him cattle, feed and everything. He went to work and this year he has it all paid—he has paid it back in three years. When I was settling up the factory this fall I did not forget to give them a good lecturing. I had a committee of the neighbors, and they told me what they thought was the value of the land three years ago and what it would bring now. The value of the land three years ago was put at $1,000 the whole thing It was a very poor section, and they claimed there was about 250 day's work to be got out of it, from that to 300. I knew pretty nearly the results of the farm, because he sent all his milk to my factory. I made enquiry at the beginning as to what more he did sell, and he admitted he sold very little more. His farm was poor and his family used all the rest. He admitted he had sold perhaps $150 worth for the past year and that he had employed about 250 days work on the farm, leaving the net value of the days work about fifty cents. The neighbors are very careful to watch each other, and particularly this settlement. They came to the conclusion that there were about 500 days work on the fifty acres for the past year. I said, "I know pretty near all the returns this man kept, I will give them to you. He has sold $1,495 off the farm, he has also rented a small piece of pasture for a day pasture for his cows, as he had not enough. It cost him $80, and he has bought $300 worth of feed during the year." I said it would not be fair to credit the total amount of money so we deducted $380 from the $1,495, leaving $1,100 in cash that he had for 500 days work. What more? The neighbors there told me that the land was worth $2,500 to-day, and that they would willingly pay it. Now there is the result. That man has steadied up, and has not drank a drop in three years. He is industrious and a good citizen, and I did not forget to tell these farmers there that three years ago they would put down this man as the most unlikely man, the poorest farmer that could be got to make a success of within one hundred miles. I say this, and no man I believe can contradict me, that measuring those results for the past year for the work that has been done and increased value, there is not a farmer under like conditions on this continent that will show and compare better results both in results in cash and the increased value of his farm. That is a sample farmer. If we take up this work and promote it, it will encourage men to work, make them more industrious. You give them means to make them better citizens and make model farmers of them. We do not want the model farmer that knows everything—a scientific man. The model farmer is the man that makes his farm pay. That is what this man has done. He has changed his condition from being the poorest farmer in the county to being the most prosperous man in the county. That is my experience for the last two or three years. On my own home farm I have fully proved this to be correct. I have established a result fully of over $2 a day for the average of the whole year on my farm. I took a farm six years ago with a very light soil, run out and barren, and there was no field on the farm would produce a good crop. To-day the crops are something immence. If I would tell you the results attained on my home farm you would perhaps not believe it, and my only way of doing so is to invite you to come down next July or August and see for yourselves. My crops last year were worth $4,500, taking an inventory of the market value of crops produced on the one hundred and twenty acres. I will be glad to have any member of the Association or even the whole of the members come down some time in the month of July or August, and you will see for yourselves and judge, because I know in farming seeing is believing, and there is nothing that will make a man believe quicker than seeing. That is my personal experience so far, and I give it to you. My motive and desire is for the benefit of my neighbor, for the benefit of my country at large, and if I can do anything in that way I am very desirous of doing it, and I will do my very best to promote these objects in any way you think best

J. C. Snell, in moving a vote of thanks to Mr. Macpherson said: This is a subject we are all deeply interested in. I confess for myself as Mr. Macpherson proceeded with his address it occurred to me that his ideas were largely visionary, and perhaps more theoretical than practical, and if it had not been for the illustration he gave us at the close of his address I fancy I should still have been incredible as to the practicability of Mr. Macpherson's scheme. But if such illustration as the one he gave us can be extended over a wide area, I quite agree with him it would work a revolution in the agriculture of this country and the happiness and prosperity of the people, and I am quite sure all of us

will be glad if Mr. Macpherson can formulate a scheme that would be practicable, and can be extended to produce such results as he has forshadowed in his address to day.

The motion was seconded by Mr. SISSONS and unanimously carried.

Mr. LEGGE said : I have much pleasure in supporting the motion. Coming from the east last winter, from the Eastern Dairymen's Association, I met a number of gentlemen from Glengarry, men who were travelling through the country continually, and they told me of the results of this farm Mr. Macpherson has mentioned. This was before I heard anything from Mr. Macpherson. I was very much pleased with the information there gentlemen gave me at that time, and I thought the matter might be practicable at some time.

Mr. MCKINNON : Coming from the neighborhood in which Mr. Macpherson resides, and being a representative of that division in which he is living and carrying on these operations, I am in a position to say something regarding the practicability of his farm scheme and the truthfulness of the remarks given by Mr. Macpherson. I had occasion to visit his farm, and I must confess I never saw anything that surprised me more than the results that he was able to demonstrate there from the system he has submitted to this Board. It is a fact that the farm he refers to as his home farm is a light soil. It has no natural advantages whatever other than the locality in which it is situated. But a visit there and an examination of the system under which farming has been carried on will convince a practical farmer at once that it is the proper system that is applicable and is sure to succeed in this Province and this part of the Dominion under existing circumstances. It is largely carried on as a dairy farm. General farming is carried on as well, and the results under the system as applied under the direction of Mr. Macpherson are something really wonderful. I have much pleasure in adding my testimony to the facts laid before the Board by my friend Mr. Macpherson.

Mr. AWREY : Mr. President, I wish to say one word in accord with what Mr. Snell has said. I felt for a while that Mr. Macpherson's views were somewhat visionary. I think those circumstances coming from his own farm have demonstrated his theory to be a correct one, and the best evidence of a man's faith in his scheme is his willingness to put his private capital into it ; and when I learned that Mr. Macpherson had in two cases invested his private capital I felt he had faith in his proposition. However, we must remember one thing, that there are not many farmers in the Province of Ontario that are able, like my friend Mr. Macpherson, to get the first three thousand to start with. If we had scattered all over this Province men like Mr. Macpherson to put their hands in their pockets for the good of their neighbors and their country, doing as he has done, there would be a marked improvement to be seen in the farms of our Province very soon. I was talking with a man in Gananoque, a manufacturer, after having listened to Mr. Macpherson's address at the Eastern Dairymen's Association. He said he had visited Mr. Macpherson's farm and every word he said was fully demonstrated in the results attained on that farm. Yet we must remember one thing, Mr. Macpherson is practically a capitalist—a man of wealth, who was able to furnish the capital upon which men build fortunes. I venture to say if we had five hundred men in the Province of Ontario who would invest the first $3,000 for a number of farmers, and then be guided by men like Mr. Macpherson, there would be a large measure of success. But you must understand that in all these schemes these men have the advantage of Mr. Macpherson's supervision, they work under his direction, they carry out his instructions, and the difficulty is to find the same number of men with practical experience and essential knowledge Mr. Macpherson has, to guide and direct the men who are trying to mature his scheme. I have been delighted with his address. It is full of information, and I fully believe he is confident he can succeed in every case, if he only had the direction of it. But I find the difficulty is to know where we are to get the same character of men of Mr. Macpherson to guide and direct these young men in manipulating their farms and in improving their circumstances. If Mr. Macpherson would devote his whole life to teaching the young men throughout Ontario I think it would be money well expended for us to invest some few thousand dollars in maturing his scheme in different parts of this Province.

Mr. MACPHERSON: In connection with this matter not only would this scheme produce these results but it also includes the providing of the means for all farmers coming under the same regime to acquire the same results. I would take one farm as a public demonstration, one farm in a township. I think our progress might be very slow, for we would have to educate our men to produce these results. In connection with our Agricultural College at Guelph I find from close observation that they are taught there the science of agriculture and all its requirements. They are also taught practice, but they are not taught how to utilize this in a business transaction so as to produce these successful results. Now, to bring this matter in connection with the College, I would propose to take a few farms right around the College, ones that are now found on working do not pay. Take one of these farms for dairying, another for beef production, another for market production, and another for fruit; and after these are acquired let them be an object lesson and a means of training the young men to know how to utilize that knowledge. When those four farms have been made a success take four more, and so on all round, making the entire environment of the College a success. What do we find to-day? The farmers in the immediate vicinity of the College are no better than those hundreds of miles away, and it is a reflection on the College. We should take farmers in the immediate vicinity, and I lay this before them, and that will be a school whereby in a few years each and every student who is ambitious, and desirous of improving his condition, will be able to take true science and practice and develop it in practical farm life. Then we will have lots of young men who eventually will be able instructors, public instructors, to assist the farmers in working this scheme out and making it general throughout the land. The few farms I am starting in Glengarry are sufficient for the east, and we could easily have a few in the west around the College there. We want to educate these young men where to begin and where to end, and having these farms there would be a profitable lesson to the students and also a practical lesson to all. The point is that I do not ask you to invest a dollar, but only to loan it. My idea is that if this Association chooses to put into my hands the money I will give my security. I will give the Association my note, and I will have the man that I undertake also endorse the note, which will be bankable security. If you will give it at a reasonable rate of interest, say three or four per cent., I will guarantee to build a farm and build a farmer, and leave the whole, and have principal and interest in ten years. (Applause.)

PRESIDENT DAWSON: I have much pleasure, Mr. Macpherson, in tendering you the thanks of this Board for your able address.

Mr. MACPHERSON: I thank you kindly for this mark of your appreciation. I only hope that if anything is done it will be done soon. I can assure you I will give my careful attention to it, and I will require, of course, to have the matter talked over and considered in every detail, and when the Board is prepared to go into this matter I am prepared to go into it with them, and give them an idea of what I propose to do.

It was moved by Mr. RAWLINGS, seconded by Mr. LEGGE and adopted, that a copy of the address of Mr. Macpherson and remarks made since, be sent to the weekly *Globe* and *Mail*.

Mr. MCKINNON moved, seconded by Mr. SNELL and carried, that the election of officers be proceeded with.

ELECTION OF OFFICERS.

Mr. MCKINNON nominated Mr. SISSONS for President, seconded by Mr. MALLORY. No other being nominated the President declared Mr. Sissons elected President for the ensuing year.

Mr. SNELL nominated Mr. W. C. EDWARDS as Vice-President, seconded by Mr. MCKINNON and carried unanimously.

The President-elect, Mr. SISSONS, then took the chair.

Mr. AWREY: Our late President, Mr. Dawson, has been a model of uniform courtesy in his treatment of the members of this Board. He has been a model presiding officer, and he has endeavored to expedite business and in every respect has reflected credit upon the Association. I take pleasure in moving a vote of thanks be tendered Mr. Dawson for the very able and efficient manner in which he has presided over the deliberation of this Association for the past year. Seconded by Mr. SNELL and unanimously carried.

The President tendered this vote of thanks to Mr. Dawson, who replied in a few words expressing his pleasure at receiving this mark of appreciation of his efforts.

It was moved by Mr. LEGGE, seconded by Mr. COHOE and carried, that the following gentlemen be appointed a committee to strike the standing committees for the current year: Messrs. AWREY, SNELL, RAWLINGS, MCKINNON and the mover, and to report at the afternoon meeting.

Mr. MCKINNON moved, seconded by Mr. COHOE, that the meeting adjourn till three o'clock p.m. Carried.

The meeting resumed at three o'clock p.m.

President SISSONS read a telegram from the Mayor of Guelph offering accommodation for holding the Fat Stock Show there.

Mr. SNELL moved, seconded by Mr. COHOE, that the Board hold the Fat Stock Show in December next at Guelph. Carried.

COMMITTEES.

Mr. AWREY presented the report of the committee to strike the standing committees for the current year as follows:

The special committee appointed to name the standing committees for the year beg leave to report the following:

Executive Committee: Messrs. Awrey, Snell, Rawlings, Edwards, Legge.

Finance Committee: Messrs. McEwen, Rowand, Dawson, Cohoe, Mallory, Westington.

Horse Show: Messrs. Awrey, Rowand, Rawlings, Snell, McEwen, Dawson, Wade and McKinnon.

Dairy Show: Messrs. Legge, McKinnon, Edwards, Mallory, Westington, Awrey, Wade.

Herd Books: Messrs. Snell, Dawson, Awrey, Cohoe, Westington, Wade.

Mr. AWREY then moved the adoption of the report, seconded by Mr. DAWSON. Carried.

Mr. DAWSON moved that the Secretary be empowered to call a meeting of the Board at such a time as would be convenient to himself at the time of the horse show.

Mr. SNELL: The Herd Book Committee begs leave to report that on account of the loss by fire of a large number of printed volumes of the pedigreed records of the Swine Breeders' Association, the secretary be instructed to secure tenders for the following records, viz. 400 volumes of No. 3 and No. 4.

Mr. SNELL, moved the adoption of the report, seconded by Mr. COHOE. Carried.

Mr. LEGGE: I think the treasurer should hand over for inspection the mortgage on the estate that represents the Prince of Wales' prize money and also the insurance policy. If the matter of insurance on the building had come up there would likely have been $10,000 more placed on the buildings. These matters should be looked into occasionally.

Mr. AWREY: I think we should reduce the interest on that mortgage to six per cent. if the security is ample.

Mr. LEGGE, moved that the Finance Committee report to the members of the Board in reference to this.

PROPOSED SALE OF REAL ESTATE.

Mr. AWREY, on behalf of the committee to report on the Jamieson proposition, said: Your committee beg leave to report that after due consideration they instructed Mr. Jamieson it would be necessary for him to place in their hands an offer that would be considered perfectly confidential on our part so as not to be used to his detriment in dealing with other people. (Mr. Awrey then read report and read an offer from Mr. Jamieson.)

Mr. LEGGE: I got some information when I was going down to dinner. I met one of the jury that has been sitting in the case of Mr. Simpson's, and in conversation I asked him what they considered Mr. Simpson's land to be worth, that is the frontage, he said the matter had come up and they considered it $1,500 a foot, that would be the frontage on Yonge street. After luncheon I called upon a broker, and I asked him his opinion in reference to it and he said he did not know, but he knew the valuation of Simpson's. He said it was worth $2,000 a foot, it was one of the most valu ble lots in the city. I would not be favorable to entering into any agreement with Mr. Jamieson from information I have without due consideration of this matter, and as Mr. Dryden said yesterday, I think we cannot dispose of it without offering it for public competition.

The PRESIDENT: I think we should put this property up by tender.

It was moved by Mr. MALLORY, seconded by Mr. LEGGE and adopted, that this Board after having duly considered all the circumstances and after consultation with the Minister of Agriculture, who in his opinion believed it was necessary for any property held in trust by this Board for the Government, or by any institution forming a part of our Governmental system, that any property disposed of must be so disposed of by public competition; therefore be it resolved that the Secretary be instructed to advertise for tenders, making the reservation as is customary, that no tender necessarily must be accepted by this Board, and that before doing so the whole circumstances be submitted to our solicitor, from whom we obtain an opinion as to our right under the existing statute to so dispose of the above mentioned property; and that any legal formalities requisite be obtained so that all responsibility might be assumed by our legal adviser; and that in advertising for tenders it shall be necessary that they be submitted not later than Wednesday the 20th day of March instant, at 12 o'clock noon, that the said tenders be sent to the Secretary of this Association who will submit them to a committee of this Board composed of the following names, viz.: Messrs. Awrey, President Sissons, Snell and the Secretary, who will have power if they so deem advisable, to summon or have summoned at once, the full Board to whom they shall submit the tenders in order that the matter may be dealt with according to law.

Secretary WADE: There is one point I wish to speak of, and that is the furniture for the office. Everything I have is borrowed. I suppose you will allow me to act as I think proper in getting supplies with all due economy.

President SISSONS: Yes.

The meeting adjourned, at 4.45 p.m.

AGRICULTURE AND ARTS COUNCIL.

The Board met at the Walker house at 8 p.m., on Wednesday, the 17th April, 1895.

The following members were present: Jonathan Sissons, (President), Barrie; D. P. McKinnon, South Finch; Joshua Legge, Gananoque; B. Mallory, Frankford; W. J. Westington, Plainville; J. O. Snell, Snelgrove; N. Awrey, M.P.P., Hamilton; John E. Cohoe, Wellandport; Wm. Dawson, Vittoria; Jas. Rowand, M.P., Dunblane; R. McEwen, Byron; Albin Rawlings, Forest, and the Secretary.

The minutes of the last meeting were read. Moved by Mr. J. LEGGE, seconded by Mr. D. P. MCKINNON, that they be confirmed. Carried.

Mr. SISSONS: With regard to the final winding up of the tenders, I might say that Mr. Snell and myself met here to open the tenders. The secretary reported that there were quite a number received and returned to the parties sending them, as instructions had been received from the Attorney-General that we were not to dispose of the property.

Mr. WADE: The day before the tenders were to be opened I had a letter from the Attorney-General telling me to stop the sale. I immediately waited on Mr. Dryden, who said it had gone so far we had better take in the tenders. I consulted our solicitors in the morning and they advised me to return them all if possible without opening, which I did as far as I could.

Mr. AWREY: I think it was quite right on the part of Mr. Wade to return them without opening. It would not have been fair to open them and tell what the tenders were.

The secretary then read communications from Mr. C. C. JAMES, Deputy Minister of Agriculture, and Mr. W. W. BALLANTYNE, President of the Ayrshire Breeders' Association, Stratford, as follows:

TORONTO, April 2nd, 1895.

DEAR SIR,—By direction of the Minister I send you copy of the account paid by the Public Works Department for removal of the wall of Agricultural Hall, on Queen street, together with the letter of Mr. Kivas Tully accompanying it. The Minister thinks it would be better for your Association to send the Provincial Treasurer a cheque for this amount, $274.87, rather than to have it charged against your appropriation.

Yours very truly,

(Sgd.) C. C. JAMES,
Deputy Minister of Agriculture.

Mr. HENRY WADE,
Secretary Agriculture and Arts Association, Toronto.

STRATFORD, April 15th, 1895.

Mr. HENRY WADE,
Secretary Agriculture and Arts Association.

DEAR SIR,—Owing to the fire burning all the records of the Ayrshire Breeders' Association, including all the First and Second Volumes of the Ayrshire Herd Books on hand, and as we require a number for new members, I, as President of that Association, ask your Association to deal as generously as possible with us in supplying them.

Yours truly,

(Sgd.) W. W. BALLANTYNE.

The SECRETARY: If you will remember at the last meeting I thought we should republish the Ayrshire Breeders' Record, but it was finally struck out. There are a good many First volumes out, but only sixty of the Second were sent out of two hundred and fifty. Of course new members are coming in every day and looking for a book, and I have nothing to give them.

Moved by D. P. MCKINNON, seconded by Jas. ROWAND, that the matter be referred to the Herd Book Committee. Carried.

THE DAIRY SHOW.

Moved by D. P. MCKINNON, seconded by Joshua LEGGE, that the Association hold a dairy show some time during the year in Eastern Ontario. Carried.

Mr. CARROLL, representing the town of Gananoque, spoke in favor of the dairy show being held there, making liberal promises of assistance, and also read the following resolutions:

At a meeting of the Gananoque Horticultural Society, held April 13th, 1895, the following resolution was carried unanimously:

Moved by Mr. M. McPARLAND, Director, seconded by T. C. STARK, Vice-President, and resolved: that this Society request the Agriculture and Arts Association to hold its dairy exhibition at Gananoque in connection with this Society's annual fair, the first week in September next, or at any other convenient time, and to take full control and management of said joint exhibition. And this Society hereby guarantees all necessary accommodation for such exhibition, and such proportion of the gate receipts as may be agreed upon. And that every effort and influence of this Society will be used to make said exhibition a success in every respect. And that the Mayor of Gananoque or such other person as the Town Council may appoint, is hereby authorized to represent this Board at a meeting of the Board of Agriculture and Arts and make such arrangements as may be mutually satisfactory.

We hereby certify that the above is a true copy of the resolution.

M. McINTYRE, President.

FREEMAN BRITTON, Secretary.

Copy of resolution passed at a special meeting of the Council of the Town of Gananoque, held April 15th, 1895.

Moved by Councillor CARROLL, seconded by Councillor PARKE, that the Town Council of Gananoque request the Agriculture and Arts Association to hold this proposed Dairy Exhibit Show at the Town of Gananoque and pledge themselves to do all in their power to make the same a success, and co-operate in every way in their power with the Agriculture and Arts Association with that object in view.

I certify the above to be a true copy.

S. McCAMMON, Town Clerk.

GANANOQUE, April 13th, 1895.

Three gentlemen, viz ; The MAYOR, Mr. PONTON and Mr. HURLEY spoke at length on behalf of Belleville, saying they would do all they could in order to give ample accommodation, etc.

Mr. D. P. McKINNON also spoke on behalf of Ottawa, but, it was moved by Mr. AWREY, seconded by Mr. DAWSON, that the matter of choosing a point for the Show be determined to-morrow at 2 o'clock.

Moved by Mr. McKINNON, seconded by Mr. LEGGE, that the sum of $2,000 be appropriated for a dairy show to be held in 1895.

Moved by Mr. McKINNON, seconded by Mr. WESTINGTON, that Mr. Wade's name be added to the Dairymen's Committee. Carried.

REPORT OF THE HERD BOOK COMMITTEE.

The Herd Book Committee beg leave to report recommending that the Secretary be authorized to receive tenders for printing and binding 200 or 250 copies of volume two of the Ayrshire Herd Book, and that the Chairman of the Herd Book Committee and the Secretary be a committee to open tenders and to award the contract.

J. O. SNELL, Chairman.

Moved by Mr. RAWLINGS, seconded by Mr. WESTINGTON, that a vote of thanks be tendered to Mr. Wright for the use of the room. Carried.

The meeting then adjourned.

The Council again met at 8 p.m. on April 18th, 1895, the President in the chair Present: Messrs. Awrey, Mallory, Cohoe, Rowand, McEwen, Rawlings, Dawson, Westington, McKinnon and Snell.

On motion, Mr. Snell was appointed to act as secretary, *pro tem.*

Mr. DAWSON moved, seconded by Mr. ROWAND, that the Provincial Dairy Show be held at Gananoque.

Moved in amendment by B. MALLORY, seconded by Mr. McEWEN, that the Show be held at Belleville.

The claims of Gananoque were ably presented by Messrs DAWSON and LEGGE, and those of Belleville by Messrs. MALLORY and McEWEN.

The original motion was declared carried.

Moved by Mr. McEwen, seconded by Mr. Rawlings, that the President and Chairman of the Finance Committee be instructed to look into the insurance of the property on the Island, covered by our mortgage as security for the amount of the Prince of Wales' Prize Fund, and to report to the next meeting of the Council, also to obtain and to hand to the Treasurer the mortgage and insurance policy. Carried.

A meeting ot the Council of Agriculture took place at the Walker House on the evening of April 19th, 1895, at which Mr. McEwen, who, with the President, was appointed on Wednesday evening as a committee to look into the matter of the security and insurance for the Prince of Wales' Prize Fund, reported as follows verbally :

That the committee had called at the office of Moss, Barwick & Franks, and that W. W. Wright of that firm had shown them the deeds, mortgage and insurance policy, and had satisfied them that the security was ample. They also recommended that the interest be reduced to six per cent. for the future.

On motion of Mr. Legge, seconded by Mr. Rawlings, it was resolved, that the interest on the sum of $800, called the Prince of Wales' Prize Fund, now on mortgage on the Island property, be reduced to six per cent.

N.B.—A list of the papers in connection with this mortgage was since shown to this Committee by the Secretary, furnished by Moss, Barwick & Franks, and acknowledged to be received by the Treasurer, Mr. David Kirkwood of Brampton.

H. Wade, Secretary.

April 24th, 1895.

Meeting of Council at Walker House, April 20th, 1895.

Present : Messrs. Sissons (in the chair), Edwards, Legge, Westington, Rawlings and McEwen.

Moved by Mr. Legge, seconded by Mr. Westington, that R. McEwen act as Secretary.

Moved by Mr. Legge, seconded by Mr. Rawlings, that the following resolution be sent to the Minister of Militia and the Commandant at Military District No. 2.

That the great success of the first Canadian Horse Show just terminated in this city, and which will, without doubt, contribute largely to bringing into prominence the superior horses bred by the farmers and stock breeders of Canada, and also stimulate them (the farmers and breeders) to still greater efforts in superior breeding, and thereby advance the general interests of the farmers of Canada, and which has been so admiraby managed by the joint actions of the executives representing this Association and the Country and Hunt Club of Toronto, is a result most highly appreciated by this Board. At the same time, the carrying out of such a show would be impossible without the use of a suitable building in which to hold it ; and this Board esteems it a high privilege to have obtained, through the kind efforts of Lieut.-Col. Otter and commanders of corps in this city, the consent of the Minister of Militia and Defence, the use of the New Armouries, being, in fact, the only premises in Toronto in which such a show could be held. This Board, therefore, desires to place on record its sincere thanks to the Minister of Militia and Defence for the use of the building, and Lieut.-Col. Otter and commanders of corps for their efforts in obtaining the use ot same.

Moved by Robt. McEwen, seconded by Albin Rawlings, that the Secretary be hereby instructed to collect fron Mr. Jamieson, the balance due the Association on rent up to March 3rd, and, as the Government has taken possession of the property on which Mr. Jamieson claims compensation, he must look to them now for consideration and not to this Council. Carried.

Resolved that D. P. McKinnon be added to the Fat Stock Show Committee.

Moved by Mr. Rawlings, seconded by Mr. Westington, that the President, Messrs. Awrey and McEwen be notified to attend the meeting for the adjustment of accounts in winding up the Horse Show.

The meeting then adjourned.

THE HORSE SHOW.

Toronto, February 18th, 1895.

At a meeting of the Horse Show Committee of this Association held in the office of the Association, the following members were present: R. McEwen, Byron; J. C. Snell, Snelgrove; N. Awrey, M.P.P., Hamilton, and H. Wade, Toronto.

From the Toronto Country and Hunt Club: Major John D. Hay; Dr. A. Smith; John K. McDonald; E. Bristol and Stewart Houston.

At this meeting the following basis of union for holding the Canadian Horse Show was arrived at:

Outline of agreement between the Agriculture and Arts Association and the County and Hunt Club of Toronto (Limited.)

(1) The Canadian Horse Show shall be under the joint auspices of the Country and Hunt Club and the Agriculture and Arts Association, at Toronto, on Thursday, Friday and Saturday, 18th, 19th and 20th.

(2) The Agriculture and Arts Association shall have charge of breeding classes, give prizes, receive entry moneys and pay judges in those classes.

(3) The Country and Hunt Club shall have charge of harness, saddle and hunting classes, give prizes, receive entry moneys and pay judges in those classes.

(4) The general expenses, not including prizes and judges' expenses, shall be borne in the proportion two-thirds by the Country and Hunt Club, and one-third by the Agriculture and Arts Association.

(5) The surplus of general receipts over general expenses shall be divided two-thirds to the Country and Hunt Club and one-third to the Agriculture and Arts Association.

(6) The expenses shall be subject to approval of a Joint Committee of Management.

JOINT MEETING.

The first joint meeting of the Toronto Horse Show, March 6th, 1895, was held in Toronto Athletic Club, College street, at 8.30 p.m.

There were present Messrs. Robt. Davies, Toronto; N. Awrey, Hamilton; Dr. Smith, Toronto; H. N. Crossley, Toronto; Albin Rawlings, Forest; Joshua Legge, Gananoque; Jonathan Sissons, Barrie· John Kittson Macdonald, Toronto; J. K. Osborne, Toronto; Wm. Dawson, Vittoria; J. C. Snell, Snelgrove; Stewart Houston and Henry Wade, Joint Secretaries.

It was moved by Mr. Wade, seconded by Mr. Snell. and carried, that Mr. Awrey occupy the chair.

The minutes of the Joint Committee of the Canadian Horse Show and the Agriculture and Arts Association were read by Mr. Wade, which were adopted by the meeting.

CORRESPONDENCE.

Mr. STEWART HOUSTON read several communications from the commanding officers at Stanley Barracks, granting the use of the new Armouries for the purpose of holding the show, and also a request from them for the use of the structure.

It was moved by R. DAVIES, seconded by J. K. MACDONALD, and adopted, that the request of Col. Otter for the use of the structure in the new Armouries for the purpose of holding a band concert on the Tuesday afternoon of the Horse Show be granted.

Mr. HOUSTON read a communication from the Toronto Brewing Co., and one from Mr. Walker, offering prizes for the show.

Mr. SNELL moved, seconded by Mr. SISSONS, and was resolved, a vote of thanks be tendered to these gentlemen who have so liberally contributed towards the prize list of the Canadian Horse Show.

GENERAL BUSINESS

It was moved, seconded and adopted, that the Mayor and the Chairman of the Executive Committee be appointed members of this Committee.

A plan of the structure to be erected in the armouries was presented to the meeting by Mr. F. L. Fellows, and it was resolved the details to be left to the Executive Committee to be appointed on motion of Mr. DAVIES, seconded by Mr. DAWSON.

Mr. STEWART HOUSTON thought there should be a committee to look after the work every day. There was already a committee composed of nine members from the Agriculture and Arts Association and nine from the Country and Hunt Club, but the work was heavy and it would require a small committee to attend to other business every day, gentlemen of easy access, consisting say of five members who could make all arrangements and call meetings of the main committee whenever advisable.

A committee composed of the following members was appointed on motion of Dr. SMITH, seconded by Mr. OBSORNE: Messrs. N. Awrey, Robt. Davies, Geo. Beardmore, Major J. D. Hay, H. N. Crossley, J. K. Macdonald and Secretaries H. Wade and Stewart Houston be a committee, and that they transact general business.

Mr. HOUSTON stated in regard to stabling, that Messrs. Silver & Smith had arranged to get Bond's old stables on Sheppard street, and have fitted up sixty stalls, and would place them at the disposal of the exhibitors at a very moderate rate, and board the horses during the show.

In submitting estimates of cost of show, Mr. Houston gave the expenditure at $2,000. Five hundred had been received from the city of Toronto and $200 for programmes, leaving $1,300 only to be got from the gate. The cost of the structure had not been estimated, but for the Military Tournament it was $400, and it seated 3,000 people, and extra material cost $162.

Mr. DAVIES moved, seconded by Mr. J. K. MACDONALD, and adopted, that the Secretary-Treasurer of the Agriculture and Arts Association be appointed Treasurer of the general funds of the Canadian Horse Show.

Mr. HOUSTON proposed a vote of thanks to the Toronto Athletic Club for their kindness in granting the committee the use of the room for the present meeting, which was seconded by Mr. Wade, and carried unanimously.

The meeting adjourned at 10.15.

The Committee of Management of the Canadian Horse Show held a meeting in the Toronto Athletic Club on April 10th, 1895, at 8 o'clock p.m.

The following members were present: Robt. Davies, Chairman, representing the Clydesdale Horse Association; N. Awrey, M.P., Hamilton; J. C. Snell, Snelgrove; J. Sissons, Barrie; Joshua Legge, Gananoque; A. Rawlings, Forest, and Henry Wade,

Toronto, representing the Agriculture and Arts Association; John Gardhouse, Highfield, representing the Shire Horse Association; H. N. Crossley, Toronto, representing the Hackney Horse Association; Andrew Smith, Edmund Bristol, C. W. Clinch, J. Macdonald and Stewart Houston, representing the Country and Hunt Club.

Mr. WADE read the minutes of the last meeting, which were confirmed.

Mr. HOUSTON gave a synopsis of financial affairs as follows: Estimated receipts, $4,310; expenses, $2,400.

As regards subscription for prize list, he said that there was no liability as to prizes, in fact, there would be something over.

Mr. WADE then read the minutes of the meeting of the Executive Committee.

Moved by EDMUND BRISTOL, seconded by MAJOR MCEWEN, and resolved, that the statement of the action of the committee as to arrangements and preparations as stated by the secretaries, and also as contained in the minutes of the Executive Committee now read, be approved and confirmed.

Dr. STEWART and Dr. HODSON were appointed a committee in case of any dispute arising as to the welfare of the horses.

It was moved and seconded that Mr. Edmund Bristol be elected convener of the Reception Committee, and the conveners of the different committees be added to the Executive Committee already confirmed; also that Jonathan Sissons, President, and W. C. Edwards, M.P., Vice-President of the Agriculture and Arts Association, be added to all committees.

Moved by ALBIN RAWLINGS, seconded by JONATHAN SISSONS, that children be admitted to the show on Saturday morning at ten cents each. Carried.

The meeting then adjourned.

A joint meeting of the Agriculture and Arts Association and Country and Hunt Club was held in Mr. Houston's office on May 10th, 1895, at 4 p.m.

The following members were present: Robt. Davies, Chairman, Toronto; N. Awrey, M.P.P., Hamilton; J. Sissons, Barrie; H. N. Crossley, Rosseau; R. McEwen, Byron; Dr. Smith, V.S., Toronto; John Macdonald, Major Hay, C. W. Clinch, Edmund Bristol, Stewart Houston and Henry Wade, Toronto.

Secretary WADE read the minutes of the last meeting, which were confirmed.

Moved by Major HAY, seconded by Mr. BRISTOL, that Mr. Houston write the Minister of Militia, Ontario Jockey Club, Industrial Exhibition Association, Grand Trunk Railway Company, and the Press, thanking them for their many favors. Carried.

The following resolution of the Executive Committee was ratified: Moved by Mr. JOHN MACDONALD, seconded by Mr. NICHOLAS AWREY, M.P.P., and resolved, "That the Committee of the Canadian Horse Show desire to express its high appreciation of the kindness of the Deputy Adjutant-General and the commanding officers of the Toronto Garrison in granting generously to this Committee the use of the new armouries for the purpose of holding the first Canadian Horse Show; and that in view of the kindness and generous encouragement which was given the Horse Show by the Deputy Adjuant-General and commanding officers, they be asked to accept the sum of five hundred dollars from the Committee of the Canadian Horse Show for the purpose of furnishing the Garrison mess room. And that the said sum of $500 be hereby granted for that purpose and forwarded to the Deputy Adjutant-General, with a copy of this resolution."

Moved by Mr. EDMUND BRISTOL, seconded by Mr. NICHOLAS AWREY, and resolved: "That this Committee have great pleasure in recording their great sense of obligation to the Chairman of the Executive Committee of the first Canadian Horse Show, Robert

Davies, Esq., for his services on behalf of the show, and for the ability, tact and zeal with which he fulfilled the duties of his office, and would request that he would accept the accompanying piece of plate as a souvenir of the occasion."

The mover and seconder, in supporting the motion, eulogized Mr. Davies as a good official and a successful breeder.

Mr. ROBT. DAVIES : I can assure you, gentlemen, that it has given me a great deal of pleasure to associate with such a strong committee, and it is owing to the unanimous way in which our committee worked that the show was such a success. I appreciate this plate, and as Mr. Bristol has stated, will hand it down to my descendants.

AUDITORS' REPORT OF CANADIAN HORSE SHOW.

Henry Wade, Esq., Secretary Agriculture and Arts Association :

DEAR SIR,—We have audited the receipts and disbursements of the Canadian Horse Show for 1895, and submit herewith statements showing apportionment between your department and the Country and Hunt Club, in pursuance of the agreement of 19th of February last.

All known joint liabilities have been discharged and vouchers have been produced for all payments.

The financial records are complete and satisfactory in every respect.

Yours truly,

CLARKSON & DODDS.

Toronto, May 9th, 1895.

THE CANADIAN HORSE SHOW, 1895.

STATEMENT OF THE JOINT TRANSACTIONS OF THE COUNTRY AND HUNT CLUB AND THE AGRICULTURE AND ARTS ASSOCIATION.

Receipts.

Reserved seats	$2,669 00	
Admission and children's tickets	1,750 55	
Boxes	1,562 00	
Badges (less $25 commission)	202 20	
Programmes and advertising	280 00	
Civic grant	500 00	
Surplus from prize fund to Country and Hunt Club	539 75	
		$7,603 56

Disbursements.

Furnishing, seating and decorating Armouries	$1,067 15	
Wages	950 05	
Advertising	437 79	
Bill posting, town and country	48 62	
Printing	290 55	
Catering and refreshments	309 34	
Music	227 50	
Stationery, postage and telephone rent	63 05	
Insurance	40 00	
Sundries	107 08	
Furnishing officers' mess room, as per resolution	500 00	
Special grant to Secretaries	500 00	
Souvenir to Chairman	35 00	
Bill posting, Price & Co	42 00	
Foster & Pender	32 90	
		$4,651 13

Balance on hand.

Due the Country and Hunt Club (⅔)	1,968 25
Due the Agriculture and Arts Association (⅓)	984 12
	$7,603 50

TRANSACTIONS OF THE COUNTRY AND HUNT CLUB.

Receipts.

Entry fees for exhibits in harness, saddle and hunting classes	$984 00	
Subscriptions to prize fund (including plate)	2,885 00	
Proportion of profit on joint transactions with the Agriculture and Arts Association	2,708 18	
		$6,577 18

Disbursements.

Prizes distributed, including plate	$2,845 25	
Judges' fees and expenses	108 08	
Surplus of prize fund subscriptions over distributions, transferred to joint account	539 75	
Excess of receipts over disbursements		$2,993 08

TRANSACTIONS OF THE AGRICULTURE AND ARTS ASSOCIATION.

Receipts.

Entry fees for exhibits in breeding classes	$102 00	
Proportion of profit on joint transactions with the Country and Hunt Club	1,354 09	
		$1,456 09

Disbursements.

Prizes distributed	$1,785 00	
Judges' fees	139 65	
		$1,924 65
Excess of disbursements over receipts		$468 56

In presenting this financial statement I would like to say that I think we have every reason to feel thankful for the success of our enterprise, financially as well as commercially and socially. It has been the means of bringing together a great many phases of society that do not often meet together, and all for one primary object, the love of the horse, which is shared by all classes of people with well balanced minds. The results of the first Canadian Horse Show should convice the managers of larger exhibitions that the visitors can be well entertained as well as educated by the exhibition of horsemanship on the same lines as at our late show for a whole afternoon without the aid of the so called amusements of the variety show business, so common in the present age.

The happy intermixture of the breeding, harness and saddle classes, with the mingling together of the owners and lovers of all the different breeds, has proved to be a drawing card. Nor must we forget the assistance of the ladies who so courageously rode and drove in many events with almost more daring than the men, or the unique exhibition given by the Country and Hunt Club, which was a marked success, and fairly carried away our American friends. A great many lessons in better management were brought to our attention during the show, and should the officers grant us this magnificent building another year we will be able to improve very much on the past one.

The success of this Horse Show is very gratifying to myself, as I prophesied last fall, in reporting the New York Horse Show to an agricultural paper, that if we could obtain the new Toronto Armouries for our next spring show, and get the assistance of the Toronto and Provincial horsemen, there was nothing to hinder us in the near future approximating the success of the New York Horse Show. We have all seen the fulfilment of this forecast.

H. WADE,
Secretary.

PROVINCIAL DAIRY SHOW.

Minutes of meeting of Dairy Committee of Agriculture and Arts Association, held in Gananoque, on the 17th and 18th of May, 1895.

Present: J. Sissons, Barrie, President; W. J. Westington, Plainville; D. P. McKinnon, South Finch; B. Mallory, Frankford; Joshua Legge, Gananoque, and H. Wade, Secretary, Toronto.

Gananoque was represented by Mr. J. T. Greene, Secretary of the Board of Trade; Mr. Freeman Britton, Secretary of the Horticultural Society; Mr. R. O. McCullough, Mr. M. McIntyre, Mr. J. P. Redmond, Mr. T. E. Stark, M. McParland, R. Elliott, and J. A. Webster, Warden of the County.

Mr. J. Sissons was unanimously elected chairman of the joint meeting.

Mr. F. Britton, on behalf of Gananoque, stated that the fair grounds were at the disposal of the Agriculture and Arts Association, and said that the gate receipts had been from $500 to $700 from their former shows; he also wanted to know what else was expected from the Town of Gananoque to assist the Dairy Exhibition.

The chairman explained that a delegation, consisting of Mr. Carroll, was introduced by Mr. Legge to the last meeting of the council, who read invitations from the town council and Horticultural Society, promising all the assistance in their power to make the show a success, and he certainly thought they intended to supplement the cash premium of $2,000, as was promised them by the City of Belleville had they gone there.

Mr. Legge thought that the Gananoque people would supply premiums for horses and farm products.

D. P. McKinnon said he was surprised at the apathy of the Gananoque people; he certainly thought they would supplement in a generous manner the grants for the Provincial Dairy Show, or he would not have voted for it to be held here. If this show was not to be a success they would not get any help from the Government in the future.

The Gananoque people then appointed Messrs. Stark, Britton, Green and McParland a committee to report on a financial grant at the next morning session.

Saturday Morning, 18th May.

The same persons were present as on the previous day, Mr. Sissons in the chair.

Moved by W. J. Westington, seconded by J. Legge, that the Provincial Dairy Show be held in Gananoque, Tuesday, Wednesday and Thursday, the 1st, 2nd and 3rd of October next. This was carried.

It was thought that the dairy cows giving milk should be judged by the Babcock test, and it was left to the President and Secretary to communicate with Prof. Dean or others to see if this scheme was practicable.

It was decided that the Secretary write to Mr. E. Kidd, President of the Eastern Dairymen's Association for a sweepstake prize on cheese, and to Mr. Derbyshire, President of the Creameries' Association, for one on butter.

Mr. Britton and Mr. Greene both thought the Gananoque delegation had not promised pecuniary assistance, and thought that it would be impossible for them to give fifty per cent. of the prizes.

Mr. McKinnon said he was very much disappointed that the people of Gananoque did not think they could assist the Dairy Show, and he said he would not have voted for it to come here if he had not thoroughly understood that they were going to assist handsomely.

After some more discussion the committee appointed reported that the Town of Gananoque would raise $1,000 towards the show, as well as place the grounds and buildings at the disposal of the Joint Committee, and that the stables be placed in good order.

The following basis of agreement was arrived at:

Moved by Mr. MALLORY, seconded by Mr. GREENE, That an agreement be entered into between the Agriculture and Arts Association and the Gananoque Horticultural Society, to the effect that $2,000 be provided by the former Association and $1,000 by the latter, as a fund to provide premiums and running expenses, whereby to hold a Dairy Show in the Town of Gananoque in the first week in October, and that fully $2,500 be offered in premiums, to be borne in the same ratio, namely: Two-thirds to be paid by the Agriculture and Arts Association and one-third by the Gananoque Horticultural Society, and the profits, if any, after all expenses are paid, to be two-thirds to the Agriculture and Arts Association and one-third to Gananoque Horticultural Society. Carried.

It was decided to charge for fees $1 per head for cattle, fifty cents for cattle under one year; for other entries twenty-five cents each.

The Secretary was requested to arrange with the railways for reduced rates as soon as possible.

The following general rules and regulations were adopted:

RULES AND REGULATIONS.

1st. One or more judges shall be appointed for each class.

2nd. No Exhibitor shall be a Judge of the class in which he exhibits, and no Director of the Association shall act as a Judge unless the necessity for his services prove unavoidable.

3rd. Competition for prizes is open to all, without regard to residence.

4th. In cattle classes every Exhibitor must make his entry according to the age in prize list, and abide by it, and great care must be taken to enter each animal in its proper class, as no alterations can be made after the entries close.

5th. All cattle entered in the classes for Jerseys, Guernseys, Ayrshires, and Holsteins, and other pure breeds, must have been registered in their respective herd books, and their pedigrees must be sent to the Secretary or given on the certificate of entry.

6th. All prizes will be withheld when the Judges are of the opinion that there is not sufficient merit in the animals by conformation exhibited for such prize to justify an award.

7th. Every animal entered for competition shall be under the control of the Committee, but the Joint Associations will in no case be responsible for any loss or damage that may occur; and it shall be a condition of entry that each Exhibitor shall hold the Joint Association harmless from any loss or accident.

8th. The necessary forms of entry may be obtained from the Secretary at Toronto, Ont., by those desirous of making entries.

9th. All animals competing must be entered in the name of their *bona fide* owners or their duly authorized agents, and must be the property of the exhibitor at the time of entry. Should doubts arise the Committee may require affidavits of ownership.

10th. When the entry is made the Secretary will give the person making such entry a receipt for entrance fees, which receipt will also be the admission order for the animal. A ticket with the number of the entry and the name of the animal will be forwarded to Exhibitors, which ticket must be securely attached to each animal when on exhibition, and this number will correspond with the number in the catalogue of entries.

11th. The age of each animal must be stated on the form of entry, and in all cases the age is to be computed from the first day of August of the year in which it was born.

12th. No animal exhibited shall be decorated about the head with colors other than the Association's prize ribbons until after the awards are made in their respective classes. Entries close Saturday, September 14, 1895.

13th. All attendants coming in charge of cattle will be subject to the orders of their managers or their authorized agents. All cattle must be paraded in the ring whenever so ordered by the management; anyone failing to comply with this rule will be liable to forfeit any prize to which he may be entitled.

14th. The Committee will not be responsible for any article of any kind or nature that may be lost or destroyed or in any way injured. Each exhibitor shall be responsible for any injury that may be occasioned to any person whomsoever by any animal exhibited; and each exhibitor shall indemnify the Association against all claims or demands of any kind or nature that may grow out of any injury occasioned by any animal exhibited, or arise from the negligence of the person in charge of such animal.

15th. Entries close Sept. 15th, 1895. Fees, $1 per head; under one year, 50 cents.

16th. In making entries the owner's name and address in full, the exact age of the animal, its name and registration number, for pure bred classes, and name of dam and sire, must be given on entry sheet.

17th. Cows must all be giving milk, and the awards will be made by the following scale of points as adopted by the "British Dairy Farmers' Association," under the charge of a competent person.

18th. British Dairy Farmers' Association for Judging cows at Fairs:

1 point for each pound of milk.

20 points for each pound of fat.

4 points for each pound of solids, not fat.

1 point for each ten days in milk, after the first twenty days (limit 200 days).

10 points are deducted from the total score for each per cent. of fat below three per cent. in the milk.

19th. Cows must be milked out on Monday at 6 p.m , and on Tuesday at 6 a.m. and 6 p.m., and at 6 a.m. on Thursday the test will be completed.

20th. Bulls and Heifers will be judged by conformation. All animals must be exhibited in the section set apart for their age; younger animals will not be allowed to show in a section intended for older ones. Pedigrees in all cases required.

ARRIVAL AND DEPARTURE OF ANIMALS.

21st. All animals entered for exhibition will have to be stabled at the owner's expense on the grounds.

PROTESTS.

22nd. Any exhibitor lodging a protest must first deposit $5 with the Secretary, which sum will be forfeited to the Committee if the same is not sustained. All protests must be made in writing, signed by the protestor, and must be lodged within 24 hours after the award is made.

23rd. All protests will be decided by the Committee, and their decision shall not be subject to appeal.

24th. The books must be signed by the Judges and returned to the Secretary as soon as the awards in each are completed.

25th. Committee in charge of Judges will be particular to observe the following rule: Red ribbons are designed for the first premium, blue for second, and white for third.

GANANOQUE, Aug. 20th, 1895.

Minutes of meeting of Provincial Dairy Show Committee held in town hall:

Present from Agriculture and Arts Association: J. Sissons, Barrie; Joshua Legge, Gananoque, R. McEwen, Byron; W. J. Westington, Plainville; D. P. McKinnon, South Finch; R. Mallory, Frankfort, and H. Wade, Toronto.

From Horticultural Society: M. McIntyre, T. C. Stark, E. Britton, J. T. Greene, A. N. Parke, M. McParland, R. Elliott and W. J. Nuttall.

From County of Leeds: John A. Webster, Lansdowne.

From Eastern Dairymen's Association: R. G. Murphy, Elgin.

From Creameries Association: D. Derbyshire, Brockville.

J. SISSONS acted as Chairman, and H. WADE as Secretary. The Chairman explained that the meeting was called to arrange for the running of the Show and the appointment of the judges.

The minutes of the meetings held on the 17th and 18th of May were read and adopted.

Mr. LEGGE read a letter from the Agricultural Department of the Dominion Government, stating that they were sorry that they could not give the Dairy Show any financial assistance this year.

Applicants for booths and privileges were referred to the Local Committee that would be formed.

Mr. LEGGE explained that there would be stalls for 150 cattle when repaired.

The meeting then adjourned.

The meeting resumed business at 4 o'clock p.m., and appointed judges as follows:

FOR CHEESE AND BUTTER.—Prof. Robertson, Dairy Commissioner, Ottawa, and Prof. Ruddick, Ottawa.

For Dairy Utensils.—John H. Croil, 614 St. Paul street, Montreal Que.

For Dairy Cattle.—*Ayrshires*, John Douglas, Warkworth. *Jerseys*, J. C. Snell, Snelgrove. *Holsteins*, J. M. Cook, Aultsville. All to act together.

Messrs. Derbyshire and Murphy were appointed to arrange for the erection of a refrigerator to hold the butter.

The Secretary was authorized to have 2,000 one-sheet posters struck off, and given instructions as to how to send them out; also at a later date to issue a programme, but not to print a catalogue.

It was resolved to invite Lieutenant-Governor Kirkpatrick and the Hon. John Dryden to open the Show on Tuesday, the 1st of October, at 3 o'clock, p.m.

The following Local Committee was appointed: M. McIntyre (Chairman), J. Legge, J. T. Greene, M. McParland and F. Britton (Secretary).

The Local Committee was, by resolution, authorized to appoint a Superintendent for the Live Stock Department.

The meeting then adjourned.

ONTARIO PROVINCIAL FAT STOCK SHOW.

The Ontario Provincial Fat Stock Association was again organized at a meeting held in Guelph on the 18th of June, 1895.

The Agriculture and Arts Association was represented by their Fat Stock Show Committee, consisting of Messrs. J. Sissons, President, J. C. Snell, A. Rawlings, R. McEwen, D. P. McKinnon, Wm. Dawson and H. Wade. Mr. N. Awrey was unavoidably absent.

The Sheep and Swine Breeders' Associations were represented by Messrs. R. H. Harding, Thorndale; G. B. Hood, Guelph; J. Jackson, Abingdon; Jas. Tolton, Walkerton, and F. W. Hodson, Guelph.

The Guelph Fat Stock Club was represented by Messrs. John I. Hobson, James Millar, John McCorkindale and James Anderson.

On resolution of F. W. Hodson, seconded by John I. Hobson, Jonathan Sissons was elected President, John I. Hobson, Vice-President, and Henry Wade, Secretary.

Mr. Sissons then took the chair.

On resolution the agreement of last year was adopted as to partnership, as follows:

"That the Guelph Fat Stock Club provide suitable and ample accommodation. This shall include the provision of a suitable building, well lighted by day and by night, and containing an ample water supply conveniently located in the building; sufficient hurdles to properly enclose the animals in pens of a suitable size; ample feeding troughs for each pen; enough straw to bed the animals comfortably and keep them clean.

The Dominion Sheep Breeders' Association agree to provide $500 towards the prize list, and the Dominion Swine Breeders' Association $500, on condition that the agreements entered into by the other Societies and the enactments of the meeting be faithfully carried out.

The Agricultural and Arts Association will provide a sum of money which, when added to that provided as aforesaid by the other Societies, shall be sufficient to make the prizes in all classes equal to those offered by this Association in 1893. The sums thus contributed by the Agriculture and Arts Association shall be $830 for cattle, $185 for pure-bred sheep, $310 for pure-bred swine, $236 for grade sheep, $98 for grade swine, and $114 for poultry, in all $1,733, besides silver medals offered in prizes by the Agriculture and Arts Association.

Special prizes given by parties or Societies shall not be included as a part of the grant given by the Agriculture and Arts Association, but shall be duly chronicled in the prize list.

The Agriculture and Arts Association further agrees to pay all expenses, except as previously or hereafter provided, and collect all receipts.

All the income arising from the Show shall be the property of the Agriculture and Arts Association, except the entry fees received from breeders of pure-bred sheep and swine, which at the close of the Show shall be paid over to the Treasurer of the Dominion Sheep and Swine Breeders' Associations.

The Sheep and Swine Breeders' Associations shall pay the expenses of their delegates.

Each director of the Sheep and Swine Breeders' Associations shall be furnished with a complimentary ticket, and the members and directors of the Guelph Fat Stock Club shall enjoy the same privileges as heretofore.

In case all the prizes in the pure-bred sheep and swine departments are not paid out, the proper proportion of such unpaid prizes shall be repaid to the treasurer of the Dominion Sheep and Swine Breeders' Associations.

In addition, all the members of the Fat Stock Club are to be admitted, without returning any part of their subscriptions to the Association."

The rules governing the Exhibition were gone over clause by clause, and as corrected appear below :

General Rules and Regulations.

Clause 1: Entries should be made on or before November 25th by application to the Secretary at Toronto, who will furnish blank applications on which to specify exhibitor's name and address, with age and description of animal offered. Entries, after November 25th, will be charged double fees.

Clause 2: All animals shown in the pure-bred classes, and also in the sweepstake classes for pure-breds, must be registered in Canadian records or well authenticated English or American records. Each sheep shall be labelled with the Record Association Tag. All animals shown in the pure-bred classes under one year, when not otherwise specified, must have been bred by the exhibitor. In the grade classes, statements naming the number and kind of crosses must be given at the time of making entry.

Clause 3: The following fees will be charged, and must accompany applications for entry, for which accommodation will be provided : For each head of cattle, $2 ; except for each cow entered in dairy classes, which shall be $1 ; for each sheep or hog, $1 ; for pen of sheep or swine, $1 per entry, when the animals are not entered in former classes ; for each pair of fowls or chickens, 25 cents.

Clause 4: Every animal must be entered for competition, giving name of breeder and owner, and when pure-bred, the age and record name and number must be given at the time of making the entry. Each animal shall be shown in its class.

Clause 5: A card will be furnished the exhibitor at the time of making the entry, specifying the class, the number of the section, and the number of the entry, which card must remain attached to the animal during the exhibition ; but in the case of sheep, pigs and poultry, the card shall be attached to the pen or coop.

Clause 6: No animal shall compete for a sweepstake prize that has not been shown in a regular class, or is eligible to be shown in such a class.

Clause 7: Each exhibitor of pure-bred sheep must be a member of the Dominion Sheep Breeders' Association. Each exhibitor of pure-bred swine must be a member of the Dominion Swine Breeders' Association.

Clause 8: Diligence will be used by the officers of the Board to prevent injury to, or loss of property, but they will not be responsible for any loss or damage that may occur.

Clause 9: The Exhibition will open at 8 a.m , December 10th, and close at 10 p m., December 12th, 1895. The exhibitors will be allowed to remove animals after 4 o'clock p.m., on the 12th instant. Admission will be charged until 6 o'clock p.m. of the 12th instant.

Animals.

1. No animal shall be removed until the close of the Exhibition.

2. Stock must be in the stalls or pens on Tuesday, December 10th, at 1 o'clock p.m.

3. Cattle must be well halter broken ; no vicious animal will be admitted.

4. Butchers' stock only will be eligible to compete for premiums. Animals that are to be used hereafter for breeding purposes will be excluded from competition. *This rule shall not apply to animals shown in the pure-bred sheep, swine or dairy classes.*

5. The ages of all animals to be computed to the 1st of December.

Awarding Committees.

1. Awarding Committees will consist of two judges and a referee for each class or classes.

2. Awarding Committees will commence examination on Wednesday, 11th of December, at 10.30 o'clock, and continue until awards are completed.

3. No person shall act as judge of any lot in which he may be interested as an exhibitor, the agent or employee of an exhibitor or otherwise.

4. No animal deemed unworthy shall be awarded a premium, but no premium shall be withheld merely because there is no competition.

5. In case of protest notice must be given to the secretary before, or during the examination of, the animal or article protested, or within four hours after the close of said examination a written statement setting forth the reason for protesting must be filed with the secretary on the day the note is given, and a deposit of $5 left with the protest, and forfeited if the protest is not sustained.

6. In all cases where protests are entered for improper or malignant purposes, the Board shall exclude the party protesting from exhibition for two years thereafter.

7. Any exhibitor who shall tear off a premium ribbon, or authorize another to do so, in the presence of the judges, or shall otherwise insult the judges, shall forfeit the premium and be excluded from competition.

8. The judges are instructed to award premiums to such animals as present the greatest weight in the smallest superfices—taking into consideration age, the quality of flesh, and its distribution in the most valuable portions of the carcase. This rule to be applied to special prizes also unless other conditions are given.

9. Judges are instructed that if they have good reason to believe that any exhibitor, by false entry or otherwise, attempts to deceive the committee or the public, and obtain an award by misrepresentation, they shall report the fact at once to the secretary, who shall report the same to the directors, who may expel such exhibitor for fraud for at least two years, and may withhold all or any prizes awarded to said exhibitor.

10. The entry books must be returned by the judges of each department to the secretary as soon as the awards in each are completed.

11. Great care must be exercised to preserve the judges' books, and the awards must be entered as above in a plain, legible manner in the proper place, as the premiums will be paid on authority of these entries only.

12. Judges will be particular to observe the following: red ribbons are designed for first premiums; blue ribbons for second premiums; white ribbons for third premiums, and green for fourth or commended.

13. Decisions of judges shall be final; and no appeal will be considered, except in cases of fraud and protests.

14. Objections to a person serving as judge must be submitted to the secretary in writing before the judge enters upon his duties, and give good and sufficient reasons therefor.

15. Any exhibitor attempting to interfere with judges during their adjudications will be promptly excluded from competition.

General Superintendent.

1. The superintendent will have charge of the building and caretaker. The superintendent will designate the hours of delivery of feed, forage and bedding for animals on exhibition, which can be obtained on application to him at reasonable rates. Stalls and pens shall be cleaned before 8 o'clock, and kept clean until 10 p.m. each day of the show. The aisles and passages shall be kept clean and unencumbered. Feed or bedding shall not be placed in the aisles or littered about the building, but all parts thereof must be kept scrupulously clean and tidy.

Admission Fees.

1. Tickets admitting gentlemen each day, 25 cents. Tickets admitting ladies each day, 10 cents. Children under 12 years, 10 cents.

COMMITTEES OF MANAGEMENT.

Executive Officers: Jonathan Sissons, President (Chairman); J. C. Snell, John I. Hobson, F. W. Hodson, Jas. Millar, H. Wade.

From the Agriculture and Arts Association of Ontario: Messrs. J. C. Snell, Snelgrove; A. Rawlings, Forest; R. McEwen, Byron; J. Sissons, Barrie; D. P. McKinnon, South Finch; Wm. Dawson, Vittoria; N. Awrey, M.P.P., Hamilton; H. Wade, Toronto.

Committee Sheep and Swine Breeders' Associations: Messrs. John Jackson, Abingdon; A. Tolton, Walkerton; R. H. Harding, Thorndale; G. B. Hood, Guelph; F. W. Hodson, Guelph.

Committee Fat Stock Club of Guelph: Messrs. Jas. Miller, Jas. Anderson, J. I. Hobson, J. McCorkindale, all of Guelph.

Committee on Cattle: A. Rawlings, John I. Hobson, John Miller, J. Sissons, J. McCorkindale, D. P. McKinnon, N. Awrey, M.P.P.

Committee on Sheep: J. Jackson, Jas. Tolton, J. C. Snell, Jas. Rowand, M.P., R. McEwen, G. E. Day.

Committee on Swine: G. B. Hood, R. H. Harding, Jas. Anderson, Wm. Dawson, D. P. McKinnon.

Dairy Committee : Andiew Pattullo, A. F. McLaren, Hon. Thos. Ballantyne, John S. Pearce, J. W. Wheaton.

Committee on Poultry : Jas. Anderson, Wm. Dawson, G. E. Day.

Programme Committee : J. Sissons, F. W. Hodson, H. Wade, J. McCorkindale, J. O. Snell, Jno. Jackson, Jos. Brethour, Rich. Gibson, Jas. Miller.

Secretary : H. Wade, Toronto.

Superintendent : Herbert Wright, Guelph.

A letter was read from A. Pattullo, President of the Western Dairymen's Association, offering $50 towards a Dairy Show, to be held at the same time and place, and the Agriculture and Arts Association also vote $50 towards this purpose, and in case other donations were offered sufficient to carry out a Dairy Show, it was resolved that the Western Dairymen's Association be asked to take charge of this part of the exhibit and te prepare a prize list for it. It was further decided that the matter of space be referred to the Guelph Fat Stock Club, the secretary of which be requested to call a special meeting of each club and decide whether this exhibit be one of dairy products or of dairy cattle.

Moved by JOHN JACKSON, seconded by JOHN I. HOBSON, "that the date of entry be limited to Monday, the 25th of November, and that if entries come in after that date double fees be charged."

Secretary Wade then read a letter from H. D. Smith, of Ingleside Farm, Compton, Que., offering a prize of $50 additional, provided the sweepstakes prize be awarded to a Hereford, or grade Hereford with at least two Hereford crosses, that wins the championship medal for best fat animal on the ground. The offer was accepted.

In the case of prize money witheld from Mr. Wm. Row, of Avon, at the 1894 Fat Stock Show, the following resolution was passed : "That the said Row be requested to furnish Mr. H. Wade, Secretary, between now and the 10th of December next, proof that prizes won by him and witheld by this Association, were rightfully and honorably won. In case Mr. Row does not meet the requirements of this resolution, the money now held by the Agriculture and Arts Association be divided according to the agreement of last year." Carried.

Moved by Mr. RAWLINGS, seconded by R. H. HARDING, "that the Directors of the Provincial Fat Stock Association respectfully request the authorities of the C. P. R. and G. T. R. to render every assistance in their power to bring about the prompt unloading of stock sent to the winter show, and that the secretary send a copy to the district freight agents of the C. P. R. and G. T. R. as well as the agents at Guelph."

The discussion which followed the introduction of this resolution brought out the fact that the pure-bred stock shipped to fairs, and especially to this particular show at Guelph, has frequently been delayed for hours at terminal points, and that breeders generally have experienced a great deal of difficulty in effecting the unloading of said stock.

Moved by D. P. MCKINNON, seconded by J. C. SNELL, that the judges as below be accepted.

JUDGES.

Cattle—Pure-Breds : Thomas Russell, Exeter ; Aid. Dunn, Toronto ; Referee, T. E. Robson, Ilderton.

Grades : John Scott, Galt ; William Stark, Berwick ; Referee, Geo. Morris, London. All the cattle judges to award the sweepstakes.

Sheep—Classes 8 and 11 : William Thompson, Uxbridge ; Alex. Smith, Maple Lodge ; Referee, R. W. Stephens, Lambton.

Classes 9 and 10 : John Miller, Markham ; Henry Arkell, Teeswater ; Referee, W. S. Hawkshaw, Glanworth.

Swine—Classes 13, 15, 16 and 17: Jos. Featherstone, M.P., Streetsville; Jos. Brethour, Burlord; Referee, Jas. Anderson, Guelph.

Classes 12, 14, 18, 19 and 20: Thos. Teasdale, Concord; Jas. Main, Milton; Referee, Andrew Elliott, Galt.

Poultry: George Murton, Guelph.

At a later date the rules and regulations for the Dairy Department were adopted as below:

DAIRY DEPARTMENT.

Rules and Regulations.

Rules and regulations governing other departments apply to this department also, with the addition of the following:

Cows must all be giving milk, and the awards shall be made by the following scale, under the charge of J. W. Wheaton, Secretary of the Dairymen's Association of Ontario:

Twenty points for constitution and conformation.

One point for each pound of milk.

Twenty points for each pound of fat.

Four points for each pound of solids (not fat).

One point for each ten days in milk, after the first twenty days. (Limit, 200 days).

Ten points shall be deducted from the total score for each per cent. of fat below three per cent. of fat in the milk.

Cows shall all be milked clean in the presence of the judges, at 6 o'clock on the evening of December 10th. The judging shall be done on Wednesday, December 11th. The morning and evening milk to be weighed and tested. The percentage of fat to be determined by the Babcock milk tester.

Grade animals shall have two or more pure-bred crosses of the breed to which they belong.

It shall be the duty of the judges to make the awards according to the rules, and to present to the Secretary of the Western Dairymen's Association a full report of the Dairy Department, which shall be published in the annual report. The judges are expected to include in their report suggestions as to how a winter dairy show may be best conducted and made most instructive.

Prize List.

Sec.		
1.	Best Shorthorn cow, pure-bred	$18 00
	2nd, do	10 00
2.	Best Ayrshire cow, pure-bred	18 00
	2nd, do	10 00
3.	Best Holstein cow, pure-bred	18 00
	2nd, do	10 00
4.	Best Jersey or Guernsey cow, pure-bred	18 00
	2nd, do	10 00
5.	Best grade cow, any breed	10 00
	2nd, do	8 00
	3rd, do	5 00

Sweepstakes.

Special prize, value $25, for the sweepstakes cow, any pure-bred (registered pedigree); at least two breeds must compete. Given by The William Weld Company (Limited), publishers of the Farmer's Advocate and Home Magazine, London, Ont., and Winnipeg, Manitoba.

Second special prize to pure-bred cow, silver plate, value $10, given by F. W. Hodson, Superintendent of Farmers' Institutes, etc., Guelph, Ont.

Silver plate, value $15, for the best grade cow. Given by John S. Pearce & Co., London, Ont., seed merchants, dealers and manufacturers of dairy supplies and apparatus.

$10, cash, for the best pure-bred Ayrshire cow, given by the Sun Publishing Company, publishers of the Sun, Toronto, Ont., official organ of the Patrons of Industry.

The Bryant Press, 20 Bay St., Toronto, Ont., publishers of the Canadian Live Stock and Farmers' Journal, offer a special of $15, cash, for the best cow of any weight, breed, or cross.

Andrew Pattullo, publisher of the Sentinel-Review and Dominion Dairyman, Woodstock, Ont., and President of the Dairymen's Association of Western Ontario, has kindly contributed $25 towards the prizes in the regular classes.

J. W. Wheaton, Secretary of the Western Dairymen's Association, has also contributed $10 towards the prizes in the regular classes.

Judges.

J. W. Wheaton, Secretary of Western Dairymen's Association.

T. B. Millar, Inspector and Instructor for Western Dairymen's Association.

G. E. Day, B. S. A., Lecturer on Agriculture and Live Stock, O. A. C., Guelph.

THE GANANOQUE DAIRY SHOW.

Minutes of meeting of Agriculture and Arts Association, at Gananoque, on October 1st, 1895, at 3 p.m., at office on Fair Grounds.

Members present: President Sissons, in the chair; D. P. McKinnon, South Finch; Joshua Legge, Gananoque; B. Mallory, Frankford; W. J. Westington, Plainville; J. C. Snell, Edmonton; N. Awrey, M.P.P., Hamilton; John E. Oohoe, Wellandport; Wm. Dawson, Vittoria; R. McEwen, Byron; Albin Rawlings, Forest; H. Wade, Secretary, Toronto.

A short session was held and a committee for locating the exhibits was appointed, consisting of J. Legge and M. McIntyre.

It was also decided that each judge on live stock act alone on his class, instead of all three acting on each class.

Meeting adjourned until Wednesday at 11 a.m.

On Wednesday, at 11 a m., the Board again met. The same members were present, also M. McIntyre, F. Britton and J. T Greene, from the Horticultural Committee.

Committees were appointed to look after the judging of the different classes and distribute the ribbons, as follows:

Holsteins: A. Rawlings, Forest.

Ayrshires: D. P. McKinnon, South Finch.

Jerseys and Guernseys: W. J. Westington, Plainville.

Cheese and Butter: B. Mallory, Frankford, and Wm. Dawson, Vittoria.

Dairy Implements: D. P. McKinnon, South Finch, and W. J. Westington, Plainville.

Gate Committee: R. McEwen, Byron, and J. Legge, Gananoque.

A communication was read from the secretary of the Shire Horse Association, asking the Council to print the first volume of their Record.

It was decided to lay this over to the December meeting to see if the funds held out.

Moved by JOSHUA LEGGE, seconded by W. J. WESTINGTON: "That the expenses of the President, J. Sissons, as delegate from this Association to the exhibitions in the North-west, at Winnipeg and Regina, be paid by this Association." Carried.

Moved by N. AWREY, seconded by A. RAWLINGS: "That the President be commissioned to prepare a report of the proceedings of this Council for the fifty years it has been in existence, to show what benefits have accrued from its workings to the agricultural community, and to employ what clerical assistance he may require."

The meeting then adjourned.

On Thursday, at 3 p.m., the same members were present, also members of the Local Committee. A number of accounts were presented and passed, but the accounts for lumber for covering the stables were objected to as being a part of what had been promised by Gananoque.

The Secretary was ordered to pay the delegates from the Dairymen's and Creameries' Associations ten dollars each, and the band $25.

It was moved by D. P. MCKINNON, seconded by J. LEGGE, that bronze medals be awarded to two exhibitors of dairy utensils that were not down in the prize list. Carried.

Mr. W. J. WESTINGTON asked if more funds could not be spared for plowing matches this year, as he would like to assist the county of Victoria by a grant.

Mr. Sissons explained that it would not be possible, as our finances would be at a low ebb after this show, on account of the town of Gananoque not fulfilling its obligations to this Association. They had promised faithfully to donate $1,000 towards this show but all that was received was $300 from the county of Leeds, and $100 from the town council of Gananoque, $50 from the Eastern Dairymen's Association, and $50 from the Creamery Association. The Horticultural Society had not paid one dollar of its obligation to us. The result of this is that we have to make up five hundred dollars from them as well as paying our own $2,000.

The Secretary was authorized to pay to J. Legge, for plowing match, $150; to Jas. Rowand, for plowing match, $150; to R. Mallory, for plowing match, $150; and to N. Awrey, M.P.P., for plowing match, $150.

On resolution of R. McEwen, seconded by Wm. Dawson, a vote of thanks was given to Mr. Legge for his indefatigable exertions in behalf of this Association, as it seemed as if he had carried the burden of the Dairy Show work on his own shoulders. Carried.

Mr. Legge thanked the Council for this kind resolution, and wished that the attendance had been more numerous as the show was such a good one.

A joint meeting of the Agriculture and Arts Committee and the Gananoque Horticultural Committee was held at the International Hotel, Gananoque, at 8 p.m., on October 3rd, 1895.

Members present: from Agriculture and Arts—J. Sissons, B. Mallory, R. McEwen and N. Awrey; from Horticultural Society—Joshua Legge, J. T. Greene and M. McIntyre.

The President, Mr. Sissons, asked Mr. R. McEwan, Chairman of the Finance Committee, to present the statement of finances, which was as follows:

Financial Statement.

Receipts.		*Disbursements.*	
Gates	$299 10	Total	$3,108 34
Entries	180 00	Leaving a debit of	2,129 24
County Council	300 00		
Town Council	100 00		
Dairy Associations	100 00		
Total	$979 10		

Mr. Sissons: Let us know the amount we should give the people of Gananoque credit for.

Mr. McEwen: Giving credit to the local Association here of all receipts, excepting for gates and entry fees, would be:

From County Council	$300 00
Town Council	100 00
One-third of receipts from gates and entries	159 70
Making total receipts	$659 70

This is the greatest amount we could give the local Association credit for, and our disbursements have been $3,108.34, and one-third would be $1,036.11, leaving $376.41 due by the local Association.

Mr. M. McIntyre said there was the expense of bringing an engine to run the dairy appliances, also the expense of putting up a refrigerator.

After a little discussion the Committee agreed to pay the expense of bringing the engine, and the local committee were to sell the lumber in the refrigerator, then whatever the balance was it was to be sent to Mr. Wade and he would issue a cheque.

The meeting then adjourned.

REPORT OF SUPERINTENDENT OF DAIRY CATTLE.

Gananoque, December 3rd, 1895.

To the President of the Agriculture and Arts Association:

Having been honored by the appointment of Superintendent of the Cattle Department, it gives me great pleasure to present the report on the Dairy Cattle exhibited at the Dairy Show of the Province of Ontario, held at Gananoque, October 1st, 2nd and 3rd.

It would be very beneficial for the Exhibition to be continued from year to year in different parts of the Province, as it stimulates the farmers to improve and secure better stock. There are a great many farmers in Eastern Ontario who do not attend our Industrial Fair, or any other large exhibition where they can examine the best cattle that are raised in Canada, unless it is brought within their reach. At this Dairy Show they had the opportunity of seeing many of the prize-winners at Chicago, Toronto, Montreal and Ottawa.

Holsteins.

The Holstein class brought out sixty-six head of the best animals in Ontario. They were chiefly celebrated for their milking qualities, one of the number carrying off the sweepstakes in the milking test wherever tested. Those that were here were very fine specimens of this breed, showing that the breeders of this class are using great care in improving their herds and bringing them to the high state of perfection that they have attained. I never witnessed a finer sight than when the sixteen two-year-olds were in the ring.

Ayrshires.

There were about sixty Ayrshires on exhibition, by far the largest exhibit of this breed brought out in Central Ontario, mostly from Montreal, Ottawa and county Hastings districts. Among these herds were the prize-winners at the Chicago, Toronto and Montreal shows. Judging from some of the fine animals shown, the breeders have made very marked improvement in their herds.

Jersey.

This class was well filled with the exhibits of Mr. Delong, of Mrs. Jones of Brockville, and others. A majority of the thirty cattle on exhibition were of excellent quality, showing what great care and skill will do when directed towards the improvement of any breed, and I must say that the breeders of Jerseys have brought their favorites to a high state of perfection.

Guernsey.

Guernseys were well filled by sixteen fine even specimens. McNish Bros., of Lyn, exhibited thirteen. They were excellent animals of their kind, but there was very little competition.

The general arrangements for the cattle, both for feed and water, were excellent. There were 110 stables, each accommodating two, except those kept for bulls. They were well supplied with straw, and the cattlemen were all well pleased with the accommodation provided. The manure was removed from the stables daily and the ground raked over, which made it pleasant to walk along by the stalls.

In giving a description of the different herds as regards the quality, it is needless for me to say more than that they were all fine animals, in fact the very cream of the cattle in the Dominion of Canada.

All of which is respectfully submitted.

Yours, etc.,

T. C. Stark,

Superintendent of the Dairy Cattle.

FAT STOOK SHOW COMMITTEE.

A joint meeting of the Fat Stock Show Association Executive Committee was held at Guelph on November 23rd, 1895.

Present: Jonathan Sissons, President; John I. Hobson, Vice-President; J. C. Snell, F. W. Hodson, James Millar and H. Wade; Secretary; G. E. Day and H. Wright.

The President explained that this meeting was called to make final arrangements for the show.

Arrangements were completed for newspaper advertising and for bill-posting.

The Secretary was requested to write to the judges to be on hand, and in case Mr. W. S. Hawkshaw, of Glanworth, did not accept on classes eight and nine, to write to W. J. McFarlane, of Clinton

It was arranged that the judges should commence on sheep and cattle at 10.30 a.m. on Wednesday, and on swine at 2.30 p.m.

It was also arranged that the banquet and annual address of the President of the Agriculture and Arts Association be held on Wednesday evening the 11th of December.

Mr. Jarvis, of the Poultry Association, waited on the Committee by invitation to see if arrangements could be made whereby the poultry show could be held in the same building during the show.

Mr. Jarvis, on behalf of the Poultry Association, thought they would contribute their membership fees and entry fees to the general fund if the Fat Stock Association would pay their premiums and expenses already incurred. The management of the poultry department to be left to their own Association. The prizes would amount to, say $180, the receipts, members' fees, say $90, and entries say $150.

It was resolved that Messrs. Millar and Hobson be authorized to make final arrangements with the Poultry Association.

The Poultry Association did not agree to this proposition, but agreed to take $40 from the gate receipts and run their show in the same building. In case the gate receipts were fairly good they would expect $50.

It was resolved that the students of the Agricultural College should have one entry ticket given to each of them, admitting them one day.

The meeting adjourned to day of show.

BOARD OF AGRICULTURE.

A meeting of the Board was held in the skating rink, Guelph, on December 10th, 1895.

Members present: President Sissons, in the chair; D. P. McKinnon, South Finch; Joshua Legge, Gananoque; B. Mallory, Frankford; W. J. Westington, Plainville; J. C. Snell, Snelgrove; John E. Cohoe, Wellandport; Wm. Dawson, Vittoria; R. McEwen, Byron; Albin Rawlings, Forest; and H. Wade, Secretary, Toronto.

The secretary read the minutes of the last meeting of the council held in Gananoque, and the minutes of the last meeting of the executive committee for the Fat Stock Show held in Guelph on the 23rd November, and they were both confirmed.

The secretary read a letter from Jas. Millar, president of the Fat Stock Club, saying the Poultry Association could not accept the terms offered by Mr. Jarvis at the former meeting, but that Mr. Hobson and himself had arranged to give them $40 from the gate money, and if the show was a success, $10 more, they to manage their own department, pay their own prizes and keep their members' fees.

This arrangement was accepted, also the rate of 15 cents per admission every time the visitors entered the doors.

Mr. John E. Cohoe was added to the sheep committee and Mr. W. J. Westington to the swine committee.

Mr. Legge then introduced a delegation from Gananoque, consisting of Mr. Freeman Britton and Mr. A Britton, whom he said had come up from Gananoque, bringing the amounts of accounts for lumber and other materials still unpaid from the dairy show.

Mr. Freeman Britton was then heard by the council. He explained that it was now seen that it was a mistake for Gananoque to ask for this show on account of the way things had turned out. They were under the impression that the Agriculture and Arts Association had a certain sum of money to hold a dairy show with, and did not think they would have to put up any; he did not know what their delegate had promised when he appeared before the March meeting, but the Town of Gananoque never thought they would be called upon at all, and they were astonished at the meeting held on the 17th and 18th of May that they were expected to put up a $1,000. Gananoque should have abandoned the project then, and would have, had they not been confident that they would have secured that amount from the Dominion Government as they were very near doing. Mr. McIntyre, the President of the Horticultural Society, by some reason thought the Agriculture and Arts Association had voted the sum of $500 towards repairing the buildings and had gone on with the work. He said the Horticultural Society were very sorry they could not do as they had promised, and were now not in a position even to pay the sum of $360 made up of lumber material and wages left unpaid from the show. He and his colleague were here to-day to impress on the Council their utter inability to meet this obligation and they hoped the Council would pay this amount in full.

On motion of D. P. McKinnon, seconded by W. J. Westington, a committee consisting of Messrs. McEwen, Legge, Dawson, Rawlings and McKinnon were appointed to report on this claim from the Town of Gananoque.

Letters were then read from Jos. Yuill, Carleton Place; W. H. and C. H. McNish, of Lyn; J. P. Redmond, Brockville; Jas. Cosgrove, Prescott; E M. Jones, Brockville, and D. Derbyshire, Brockville, asking for a continuation of the Government grant for dairy shows.

It was moved by A. Rawlings, seconded by R. McEwen, that the above correspondence be shown the Minister of Agriculture and published in our report. Carried.

The meeting then adjourned.

A joint meeting was held on Wednesday at 10.30 a.m.

The judges on sheep and cattle were started, and the judge on sheep in the afternoon, Mr. Hawkshaw, did not accept his invitation, so Mr. Jas. McFarlane, of Clinton, was asked in his place and reported at noon to-day. With the exception of the sheep the other classes were all furnished during the day, so no Council meeting was held.

The council met again on Thursday, December 12th, at 10 a.m., President Sissons in the chair.

The first business was to appoint Mr. John I. Hobson, of Mosboro', one of the auditors to close the business of the Association.

A letter was read from the Hon. John Dryden, Minister of Agriculture, appointing Mr. Wm. Dickie, of Oshawa, the other auditor.

A committee consisting of Messrs. J. C. Snell and J. C. Rykert, of St. Catharines, was appointed to read the President's report of the work of this Association for the last fifty years, and report on it on or before the closing meeting; also as to the compensation to be allowed for it.

The President was authorized to arrange as to the meeting with this committee.

Moved by Robt. McEwen, seconded by J. C. Snell, and resolved, "That the combined committee of the Agriculture and Arts Association, the Sheep and Swine Breeders' Association, and the Guelph Fat Stock Club, in session, desire to express their gratification that the citizens of London contemplate erecting a new live stock building on their fair grounds, as the old ones are totally inadequate, and to assure them that they will render them all the support in their power and encourage them by our attendance with our stock, and that a copy of this resolution be transmitted to the mayor of London."

PROVINCIAL PLOWING MATCHES.

Districts 1, 2 and 3.

The Provincial plowing match for the Districts Nos. 1, 2 and 3, under the auspices of the Agriculture and Arts Association and the Frontenac Farmers' Institute, was held on the farm of Mr. Charles George, on Bath Road, half mile from the limits of the City of Kingston, on the 8th November, 1895.

The summer was unusually dry. No rain fell to dampen the ground up to 30th of October, which was the first day advertised for plowing. The committee found the ground too hard and dry for plowing, and adjourned the match until as above.

The terms upon which the two committees united for the purpose of the joint match were that the prize winners pay 50 cents to the treasurer of the Farmers' Institute, and it was further agreed that they would arrange for suitable ground. Committee adopted the following rules and regulations:

RULES.

1. All entries to be made personally or by letter to A. Ritchie, Inverary P.O., on or before 8 o'clock a.m. on the day of the match.

2. Competitors to be on the ground at 8 a.m., and plowing to commence at 9 a.m., and to be completed at 3 p.m.

3. Each plowman shall draw his number, and the lot having a corresponding number shall be the lot on which he shall plow.

4. After drawing his number the plowman shall proceed to stake off his land, and shall be allowed one assistant to set and remove his stakes. Any plowman receiving further assistance shall forfeit his claim to any prize; nor shall he use his hands in fixing his furrow.

5. On proceeding to open his land each plowman shall commence at the stake corresponding with his own number, and shall back up his own furrow.

6. All plowing to be 6x9, a less average depth than 6 inches shall not be entitled to a prize, and not more than 1 inch undercut will be allowed.

7. Plowmen shall commence by a signal from the timekeeper, and shall complete their work by 3 o'clock p.m., and should there be any difference in the quantity of land a further proportionate time shall be allowed.

8. Each plowman after finishing must place his stake with the number on the centre of his land, and remove his team and plow from the lands immediately and report himself to the timekeeper.

9. Should one or more competitors be considered of equal merit, the preference shall be in favour of those finishing in the shortest time.

10. The decision of the judges shall in all cases be final, if in accordance with the above regulations.

11. All the land plowed will be judged.

12. No person will be allowed to interfere with the plowmen while at work.

13. Prize winners to pay 50 cents into the funds of the Farmers' Institute.

14. A copy of these regulations will be put into the hands of the judges and will be strictly adhered to.

Committee of Management.—W. C. Edwards, M.P., Rockland; W. P. McKinnon, South Finch; Joshua Legge, Gananoque, from Agriculture and Arts Association; also the President, E. Milton, Kingston; Hugh Rankin, Collins' Bay; J. Knapp, Kingston; J. Knight and A. Ritchie, Secretary, Inverary P.O., from the Farmers' Institute. The entries were numerous, some coming from the County of Hastings. One judge, Mr. D.

M. McDougall, from Duncanville, County of Russell, did all the judging. He was an expert plowman, and filled the position in a competent way. Mr. George entertained the committee and plowmen on the ground with refreshments at noon.

It commenced raining about 9 o'clock a.m., and continued during the day, which made it very unpleasant, but did not prevent an unusually large attendance, which was estimated at being over one thousand. This gathering of farmers had a social value worthy of notice. Discussions and comparisons of experience in connection with the best methods of plowing were freely indulged in, and it was decided that the owner of the land should consider it as greatly improved.

Prize List.

Class 1 : A. S. Milne, Seymour, $20 ; H. C. Milton, Pittsburgh, $15 ; John McGlynn Wolfe Island, $10 ; Joseph Toland, Sunbury, $7 ; John Harker, Glenvale, $5. Class 2 : James A. Stewart, Menie, $15 ; A. Howie, Westbrook, $12 ; John A. Milton, Pittsburgh, $8. Class 3, boys 18 and under : M. Bennington, Glenvale, $10 ; John Sibbet, Pittsburg, $8 ; Charlie Shannon, $6 ; Fred. Switzer, Odessa, $4.

County Match, Class 1 : Joseph Howie, Westbrook, $10, and a dozen knives ; W. B. Traves, Latimer, $10 ; Thomas Dunn. $8. Class 2 : R. Shannon, Sunbury, $10. and one years' subscription to the *Daily News* ; C. Doyle, Pittsburgh, $8 ; John Whitney, Pittsburgh, $5 ; G. Ford, Portsmouth, $4. Class 3, boys in the county, eighteen years and under : W. Tait, Collins' Bay, $8, and silver cup, value $5 ; J. McCallum, Glenburnie, $8 ; R. Burke, Railton, $5 ; G. McDonald, Latimer, $3.

Special prizes in County Match : Best outfit in Classes 1 and 2 : Pair of blankets, value $3 and 100 lbs. of flour, Robert Shannon. Best outfit in Class 3 : Hardware, value $3, H. Buck. Best opening, Class 1 : Flour, value $2.50, Joseph Howie. Best finish, Class 1 : Half-dozen plowshares, Joseph Howie. Best opening, Class 2 : Spade and shovel, value $2, Robert Shannon. Best finish, Class 2 : Half-dozen plowshares, R. Shannon. Best opening, Class 3 : New hat, value $5, and five pounds tea, value $2, W. Tait. Best finish, Class 3 : Whip and brush, value $3, W. Tait.

The directors of the Farmers' Institute of the County of Frontenac, embrace the most prominent farmers in the county, and the plowing, so far as the work was concerned, was a decided success. The result of the plowing match has been very satisfactory and affords encouragement for renewed efforts to carry out still more successfully another year the objects that the Agriculture and Arts Association had in view.

About $250 were expended in prizes, the balance over the Agriculture and Arts Association grant of $150 being to complete the county's prize list, and was collected by subscription through the members of the Farmers' Institute and the citizens of the City of Kingston.

Joshua Legge, Chairman.
D. P. McKinnon.

Districts 4, 5 and 6.

I herewith present a report of the plowing match held in Districts 4, 5 and 6, condensed from a local newspaper :

The Provincial plowing match for districts Nos. 4, 5 and 6, under the auspices of the Agriculture and Arts Association and Central Ontario Plowmens' Association, was held on the farm of Mr. James Hawkins, on Monday, 28th October. The weather in the early part of the day was a mixture of snow and rain, followed by a penetrating wind, which made it very uncomfortable for spectators, but despite the inclement weather some 400 to 500 farmers and others were on the grounds during the afternoon.

The amount contributed by the two Associations, along with some specials, made the prize list about $200, which brought a keen competition in all the classes. Twenty-six plowmen were ready at the start, most of them being from the townships of Rawdon and Seymour.

A Provincial plowing match was held in Rawdon three years ago, and the following season the association now known as the Central Ontario Plowing Association was organized, and have held two matches under their own management, previous to the joint one on Monday, and have succeeded in awakening a lively interest in high class plowing. So great has been the success achieved there that the farmers in the more southern parts of the county would no doubt find it beneficial to organize a club and hold a match either in Sidney or Thurlow.

The plowing in all the classes was such as to give the judges no little difficulty in awarding the prizes, all being good; that in the first class being especially so, owing partly to the soil being rather more loamy in this part of the field than in that plowed by class 2, and partly to make of plows, those in class 2 being confined to those of Canadian manufacture.

In the boys' class the work done was most creditable, comparing favorably with that in class 2.

Mr. Hawkins, on whose farm the plowing took place, provided a lunch for the judges, plowmen and committees at noon, and afforded every facility for the match and seemed well pleased with the work done. Mr. Fargey, whose farm adjoins that of Mr. Hawkins, also entertained several of the committee and others at dinner.

When the judges had completed their work, Mr. E. C. West, on behalf of the local Association, thanked those present for their attendance and the interest they were taking in the work of the Association, complimented the plowmen on the first-class work done, and invited the judges and plowmen to meet the joint committees for supper in Stirling, and concluded by calling upon Mr. B. Mallory, who represented the Agriculture and Arts Association to address them. Mr. Mallory spoke briefly, explaining that he had given the grant to this locality because they were the only plowing association that he was aware of in the fourth agricultural district, and he believed in helping those that helped themselves, and that the experience of the Association had been that they had better matches when they joined with some local association, who took upon themselves the details of carrying on the match.

Mr. W. A. Milne, sr., of the local Association, then read the awards of the judges and Mr. Mallory presented each with the amount of his prize as called by the Secretary. A vote of thanks tendered the Agriculture and Arts Association for the grant was received with cheers, and the crowd dispersed to meet at the Stirling House, where a substantial supper was served by mine host.

The following are the officers of joint associations and awards of judges:

Agriculture and Arts Association: B. Mallory, chairman; J. C. Snell and W. J. Westington.

Central Ontario Plowmen's Association: E. C. West, chairman; George Drury and W. A. Milne, sr.

Judges, Classes 1 and 2: Andrew Milne, Leaskdale; Wm. Welburn, Frankford and Jas. Kitchen, Burnbrae.

Class 1 (six entries): 1, Geo. Drury, Stirling; 2, Chas. Would, Campbellford; 3, Jas. A. Stewart, jr., Menie; 4, George Fry, Menie; 5, Wm. S. Milne, Menie; 6, Alex. Hume, Burnbrae.

Class 2 (nine entries): 1, Jas. A. Stewart, sen., Menie; 2, Thomas Fry, jr., Burnbrae; 3, John Wallace, Wellman's Corners; 4, Chas. Stewart, Menie; 5, Thos. Walker, Hoard's; 6, William A. Reid, Stirling.

Specials: For best plowed ridge, Jas. A. Stewart; for best finish in field, Thos. Fry, jr.; for best opening in field, Geo. Drury.

Class 3 (eleven entries): 1, Andrew Hay; 2, Alex. Kitchen; 3, Thos Watson; 4, Jas. Hay; 5, John H. Cook; Wm. Drury; 7, special by A. T. Green, pair halters, Elam Wescott.

Special: For best opening (boys' class), Andrew Hay; for best finish (boys' class), Andrew Hay.

Judges: Francis Taylor, Wellman's Corners; John Drury, Belleville; Alex. Ingram, Menie.

B. Mallory.

District No. 10.

The following is taken from an Owen Sound paper:

Fully eight hundred people attended the first Provincial plowing match ever held in this county, on Wednesday, under the auspices of the Agriculture and Arts Association, on the splendid farm of Thomas Cairns, Esq., adjoining the southern part of the town. To say it was a success is only telling half the story, as it was the largest plowing match ever held in this part of the Province. Grey and Bruce counties were strongly represented, no less than six townships sending competitors, who vied with each other skillfully during the work of the day. It is beyond all matter of dispute that such matches as these will be a benefit to the country, inasmuch as good plowing brings good crops, the latter fills the purses and money makes the country wag.

Fifty-six plowmen commenced work at nine o'clock in the morning. Owing to the recent snowstorm, plowmen had difficulties to surmount, and it was doubtless the means of detaining a large number of competitors from the eastern townships. All day long the plowing progressed, until about four o'clock. The judges had a hard task to perform, as competition was very close, but, being thoroughly competent, their decisions gave entire satisfaction.

The number of entries in each class were: Class 1, thirteen; class 2, eighteen; class 3, eleven; class 4, fourteen. There were no entries in class 5, sulky plows.

Below we give the prize winners, with prizes won:

Class 1: 1st, Wm. Forrester, Saugeen, $30; 2nd, John Forrester, Saugeen, $7 and Wilkinson plow No. 1, value $20; 3rd, David Jeffrey, Saugeen, $17 and pair of leather halters, value $2.50; 4th, James Cassidy, Saugeen, $13 and one set of irons for double whiffletrees, value $2; 5th, P. C. McGregor, Sydenham, $10; 6th, James Atkins, Derby, $5 and box of fruit biscuits.

Class 2 (men who have not taken first prize at any previous match): 1st, Charles Kettles, Saugeen, $10 and plow manufactured by Gerolamy of Tara, value $20; 2nd, Geo. Lamb, Greenock, $18 and one neck yoke, value $2 50; 3rd, H. Hutchinson, Bruce, $15; 4th, Arch. Bell, Saugeen, $6 and one set of whiffletrees, value $5; 5th, Walter Foulds, Sydenham, $5 and one box of soda biscuits.

Class 3 (young men, age eighteen to twenty-one, both inclusive): 1st, Wm. Jeffrey, Saugeen, $8 and one plow manufactured by the Massey-Harris Co., choice of any plow made by them, value $20; 2nd, R. Barnes, Bruce, $6 and one root cutter manufactured by G. T. Coleman, Seaforth, value $14; 3rd, Robert Hutchinson, Bruce, $15; special, Arthur Dalgarno, Derby, $10; 5th, Wm. Hay, jr., Derby, $2.50 and one neck yoke.

Class 4 (boys under eighteen years of age): 1st, R. B. Day, Sydenham, $18 and one neck yoke, value $2.50; 2nd, Lambert Rogers, Derby, $17; 3rd, Hugh McCallum, Derby, $14; 4th, Wm. Garvie, Derby, $12; 5th, Geo. Bothwell, Sydenham, $10; 6th, Lawrence Hay, Derby, $8; 7th, Edgar Richards, Arran, $6; 8th, P. Neelands, Derby, $4.

Judges: R. Beith, Bowmanville; S. Rennie, Scarboro'.

In the evening, at nine o'clock, at Duncan's Queen's Hotel, the directors, with their friends and the leading agriculturists of the two counties, sat down to a rich and tempting supper.

THE FAT STOCK SHOW.

The following is the report of the Twelfth Annual Provincial Fat Stock and Dairy Show, held in the Victoria Rink at Guelph on December 10th, 11th and 12th, 1895, under the management of the Agriculture and Arts Association of Ontario, the Sheep and Swine Breeders' Association, the Western Dairymen's Association and the Guelph Fat Stock Club.

Executive Officers.

Mr. Jonathan Sissons, Barrie, President, Chairman ; Messrs. J. C. Snell, Snelgrove ; John I. Hobson, Mosboro, ; F. W. Hodson, Guelph ; James Millar, Guelph ; H. Wade, Toronto, Secretary.

Committee of Management.

The Agriculture and Arts Association : Messrs. J. C. Snell, Snelgrove ; A. Rawlings, Forest ; R. McEwen, Byron ; J. Sissons, Barrie ; D. P. McKinnon, South Finch ; Wm. Dawson, Vittoria ; N. Awrey, M.P.P., Hamilton ; H. Wade, Toronto.

The Sheep and Swine Breeders' Association : Messrs. John Jackson, Abingdon ; A. Tolton, Walkerton ; R. H. Harding, Thorndale ; G. B. Hood, Guelph ; F. W. Hodson, Guelph.

The Fat Stock Club of Guelph : Messrs. James Millar, James Anderson, J. McCorkindale, Guelph, and J. I. Hobson, Mosboro'.

Committee on Cattle : Messrs. A. Rawlings, John I. Hobson, John Miller, J. Sissons, J. McCorkindale, D. P. McKinnon, N. Awrey, M P.P.

Committee on Sheep : Messrs. J. Jackson, J. Tolton, J. C. Snell, Jas. Rowand, M.P., R. McEwen, G. E. Day.

Committee on Swine : Messrs. G. B. Hood, R. H. Harding, Jas. Anderson, Wm. Dawson, D. P. McKinnon.

Dairy Committee : Messrs. Andrew Pattullo, A. F. McLaren, Hon. Thos. Ballantyne, John S. Pearce, J. W. Wheaton.

Committee on Poultry : Messrs. Jas. Anderson, Wm. Dawson and G. E Day.

Fat Stock Show.

The spacious Victoria Rink in Guelph, and the extra accommodation given by the large addition built this year, was all taken up by the display of fat and dairy cattle, fat sheep, fat pigs, live and dressed poultry, at the Twelfth Annual Provincial Fat Stock and Dairy Show. Besides the associations which have made this exhibition the great success of past years, the Western Dairymen's Association and the Guelph Poultry and Pet Stock Association have co-operated, so that this year it was much larger than before, dairy cattle and poultry being the new features. The new addition, fifty feet wide, and running the whole length of the rink, was taken up with poultry and sheep, the transfer of part of the latter exhibit relieving the congestion in the big rink last year. The dairy class swelled the exhibit of cattle, which was about the same as last year, while the sheep and swine classes were hardly up to last year's high mark.

The attendance on the first day was perhaps the best ever seen at this show in Guelph, there being over 1,000 paid admissions. The farmers from the district, however, were rather scarce, and the absence of the ladies, who are deeply interested in such shows in Britain and the States, was much commented upon by visitors from across the line.

The Annual Dinner.

The annual dinner of the Guelph Fat Stock Club to distinguished visitors, judges and exhibitors was held at the Western Hotel on Wednesday evening. The spacious dining-room of the hotel was crowded with a strong gathering of the leading stockmen of

the Province, and everything passed off most successfully. Mr. James Millar presided, having Mr. Jonathan Sissons, President of the Agriculture and Arts Association, on his right, and the Mayor on his left. The vice chairs were occupied by Jas. Innes, M.P., and J. C. Snell, Snelgrove, of the Agriculture and Arts Board.

In introducing the speaking of the evening, Mr. Millar, on behalf of the Club, extended a hearty welcome to their guests, who came not alone from Ontario, but from Quebec and the States. He trusted they would have a good time. Hon. Mr. Dryden and President Mills had to attend a Fruit Growers' Convention at Woodstock, and regretted being absent. He would call upon Mr. J. Sissons, President of the Agriculture and Arts Association, for his annual address.

Mr. Sissons congratulated the Club on the great success of the show, which was evidence that the people in this part of the country were fully alive to having the best stock. Though the Agriculture and Arts Association was passing out of existence, yet they had in charge of the Agricultural Department in this Province a Minister who understood their wants, and who would see that they were met. In Mr. Dryden's hands he felt the interests watched over by the Association were perfectly safe.

VALEDICTORY OF THE ASSOCIATION.

After a reference to the absent members of the Association, Mr. Sissons entered upon his annual address, which was an able resume of the record of the Agriculture and Arts Association.

He pointed out that the fiftieth year of the Association was drawing to a close, and with it expired the Association, having well and faithfully done its work and lived out its period of usefulness. Its work, however, had been specialized and was now being carried on by different bodies.

After a brief reference to Hon. Adam Ferguson, Hon. Henry Ruttan, Thomas Clarke Street, Hon. David Christie, J. C. Rykert, Hon. Chas. Drury, Nicholas Awrey, M.P.P., and others who had preceded him in his office, Mr. Sissons reviewed briefly the history of Agricultural Associations in this Province.

An Agricultural Society seems to have been founded about 1832 in what was then known as the Home District, chiefly owing to the efforts of Mr. E. W. Thomson. As similar societies became gradually formed in other districts the same enterprising agriculturist seems to have conceived the idea of a central or Provincial Society to connect the local ones and hold an annual Provincial Fair. After a good deal of difficulty the idea was finally carried out in 1846, when the "Agricultural Association of Upper Canada" was formed, with Mr. Thomson as its first President.

In those early days the Agricultural Societies were, to a large extent, co-operative and social organizations. We hear, for instance, of the purchase by these early bodies of quantities of new seeds for distribution among their members, of the importation of breeding animals for their common use, and even of the purchase of stumping machines for the same purpose. There were also meetings held during the winter for the discussion of subjects of interest to farmers. And of course one of the primary objects was the holding of an annual Agricultural Fair. These extended functions the Agricultural Societies gradually dropped, partly, it would seem, as they came under the control and regulation of the Government, and they passed into the hands of such societies as we have mentioned.

To perform these same labors on a more extended scale to act as a basis for the union for the various local societies to guide them in their purchases and disseminate among them agricultural information, having regard to the different requirements of the various parts of the Province, and to hold an annual Provincial Fair, were the primary aims with which the "Agricultural Association of Upper Canada" was constituted in 1846.

The work of this Association might be divided, with more or less distinctness, into four periods. The first lasts from 1846 to 1851, the second from 1851 to 1867, the third from 1867 to about 1881, and the fourth from 1881 down to the present.

During the first of these periods the Association was organized and got into good working order. A good deal of difficulty was experienced in getting the annual exhibition on a sound footing until an annual grant from the Government of the united Province got over this difficulty.

In 1851 a Provincial Board of Agriculture was constituted. The members were eight in number, outside of ex-officio members, and were to be elected by the District Societies in the Province. The manner of their election made changes in the membership very difficult, but ensured that those chosen should possess the confidence of the Province as a whole Accordingly we find few changes in the membership until 1869, when a different method of election was adopted. Early in this period an amalgamation was effected with the Board of Arts for exhibition purposes, and thus a more representative character given to the fairs.

The duties which the Board fulfilled during these years were very extended, the chief ones being the administration of the County Societies and the holding of an annual Provincial Exhibition. But many other functions also were performed, some temporary and some permanent. We shall only instance the encouragement given to the importation of valuable breeding stock, the establishment of a Professorship of Agriculture in the University of Toronto—which George Buckland, the then Secretary of the Board, was chosen to fill—and the maintenance for a time in connection with it of an Experimental Farm, and the establishment of a Veterinary School at Toronto. Of great value also were the agricultural essays and reports which the Board collected and published in its "Transactions."

After 1867 the Ontario Government took over the management of the County Agricultural Societies, which had occupied much of the time and attention of the Board, as well as several general functions previously administered by it, these being taken to create a round of duties for the Provincial Department. In the management of the Provincial Fair, however, which had now grown to great proportions, the Board found with fewer meetings ample work for its increased membership of twelve and afterwards of thirteen. The registration of stock had already been commenced and during this period some four volumes of the Canadian Shorthorn Herd Book were issued by the Board

Though the exhibitions after 1880 were still in every sense successful, it soon began to be felt that the great local fairs now covered the field and it was considered that the advantages, great though they were, which the Provincial possessed in comparison with these, were still not sufficient to justify the expense of its continuance. The chief directions in which the work of the Board has been of value since about 1880 have been in the encouragement of careful and scientific farming by the granting of prizes to farms so conducted, and the promotion of stock raising and breeding interests by the establishment of Fat Stock, Dairy and Horse Shows, and the bestowal of an increased amount of attention on the registration of stock and the issue of Herd and Stud books. Of the idea of giving prizes for farms Mr. Drury was the originator; with the development of registration and the establishment of Stock Shows Mr. Wade is chiefly to be credited.

Mr. Sissons touched on the great success of the Horse Show in Toronto in the spring, the usefulness of the four plowing matches, and the Dairy Show at Gananoque in October, which was a magnificent success in exhibits, though a failure in regard to receipts The loss of their building and documents by fire, and the retention of Mr. Wade in charge of the stock registration were also briefly mentioned. Reference was made to his visit to the fairs at Winnipeg and Regina: he was much impressed by the stock and roots shown. Mr. Russell judged over 450 animals at Regina, not counting dairy cattle. Ontario must produce nothing but the best, both in stock and grain too, and still further reduce the cost of such productions to compete successfully with this western country.

Mr. Sissons concluded: This is the semi-centennial of the old time-honored institution that has done much good in its brief time, and it now passes out of existence with a record unequalled by any kindred society. It has aimed to cater to the wants of the farmers and stock raisers of the Province pure and simple, and it now dies by Act of Parliament, and time will prove, not unhonored and unsung, but will live in the recollec-

tion of the agriculturalist as the only purely farmers' exhibition in the Provinces. Although subsidized from $3,000, $4,000 to $10,000 per year in the last half century, it leaves a property purchased, since built on by the Agriculture and Arts Association, worth $100,000, or in other words brings in to the Province of Ontario in return for their yearly grants for the last fifty years a clean income of $4,000 per annum in perpetuity, which will soon recoup to the Province every dollar advanced by them besides the advancement of agriculture in all its branches during the half century. It has been worth untold thousands to the farmers of this vast Province.

Before resuming his seat, Mr. Sissons said that while it was generally recognized as a wise step to wind up the Association, still there was no reflection on its work or on those connected with it. He predicted a great future for Ontario; they had some needed lessons yet to learn, but, considering some difficulties they labored under, there was not a more prosperous, contented, healthy body of people than in Ontario. (Applause.) The country was safe if the farmers would study their own interest, with due regard to the welfare of others. They had the best show on the continent of America (cheers), but it required enterprise and industry to hold that premier position.

His Worship Mayor LAMPREY accorded the visitors a hearty welcome, and spoke of the interest the city had taken in promoting the interests of agriculture. He called up the difference in stock now as compared with his early days, when sheep could be had for $1 a head. They had one of the finest exhibitions known, and Guelph, as in the past, would do its part in future in making it a success. The Mayor took his seat amid great applause.

Hon. THOS. BALLANTYNE, in eloquent terms, paid a great tribute to Guelph and the county of Wellington as the pioneer county in breeding and feeding thoroughbred cattle in Ontario. In past days more attention was paid to breeding and feeding in the Guelph district than in all Ontario put together. Here forty years ago the farmers of his county had bought from Dr. Wingfield the bull which started their thoroughbred stock; here he had brought his animals from Stratford to sell at Christmas at a price he could not get up there; here buyers from the large American cities came to get their choice meats. Though Guelph and district were no longer alone in the breeding of fat stock, its public spirit was ever alive to promote the interests of stock breeding. He was proud that it had fallen to his lot to win the Challenge Cup two years in succession; he could not look after the individual cow and watch her to-day as he had in the past. It was the Guelph stock that had made that department of the Provincial a success for many years. He hoped the Provincial Fat Stock Show would continue at Guelph; there was no denying the fact that this district had first set the example in stock feeding and had ever maintained the highest standard. He touched on his early experiences of the Provincial Exhibition and the good it had done him, praised the work of the Agriculture and Arts Association, and had some regret in bidding it good-bye. Mr. Ballantyne's address was in reminiscent vein and was much enjoyed.

The speech of Col. BIRCH, of Chicago, editor of the *American Sheep Breeder*, was one of the best of the evening, and certainly produced the most laughter. He spoke of his very great pleasure in being the guest of the Club, and of the tokens of hospitality that had always been extended to him in his sojourns in Ontario. He once had an idea that the manifest destiny of Canada was to come into his country; now he was waiting until they should be asked to join Canada. (Applause.) He paid a high tribute to the Canadian character, and the fostering of the higher amenities of civilization which had so strongly impressed him. He dwelt on the marvellous improvement in Western Ontario during the past forty years. Their show was the greatest Fat Stock Show in America; he hoped it would not degenerate into a mere social function as it had done in Chicago, and was in danger of doing in New York; it was a magnificent showing of stock, but where were their women? Not a corporal's guard had been there that afternoon. In New York no one took so deep an interest in the show as did the ladies. They made it fashionable; they imparted enthusiasm and success to the affair, and brought a big attendance. If the ladies would attend, their show could not be beaten in America. He praised the premier position of agriculture in Ontario; no concentration of capital had

so far dominated it, or robbed it of its rightful position ; it was the power and glory of their land. (Cheers.) He immensely admired the Ontario Agricultural College, the most practical school of husbandry he had ever seen ; every man about it seemed to know his business practically. He also felicitated them on having such a farmer as John Dryden at the head of agricultural administration in their Province ; there was some awfully fine organization lying round. (Laughter.) He was sure the influence of these fat stock shows would radiate through their Province. The Colonel closed with an eloquent tribute of respect for Canada.

Fitting and interesting speeches were also made by Mr. J. D. Moore, M.P.P., for South Waterloo ; James Tolton, Walkerton, President Dominion Sheep Breeders' Association ; J. E. Brethour, Burford, President Dominion Swine Breeders' Association ; A. Johnston, Greenwood, President of the Dominion Cattle Breeders' Association ; J. C. Snell, Snelgrove, of the Agriculture and Arts Board ; Henry Wade, Secretary of the Agriculture and Arts Association ; John Mutrie, M.P.P,, for South Wellington ; Manager Duff, of the Bank of Commerce ; Rev. W. F. Clarke, and Jas. Innes, M.P. All joined in tributes to the success of the Fat Stock Show, and to the energy of the Guelph Fat Stock Club, and most referred to the good work of the Agriculture and Arts Association. Mr. Moore put in a good word for the breeders and feeders of Waterloo ; he endorsed Guelph as the centre for the Provincial show. Mr. Tolton said Ontario was one of the best breeding grounds on the continent ; he hoped the cloud at present over agriculture would soon disappear. Mr. Bethour was proud of the success of Ontario breeders ; their country and men would stand comparison with the world. Mr. Snell was reminiscent as to the record of the Agriculture and Arts Association ; it had been his ambition when a young man to be a member of the Board ; under the new arrangements its work would be carried on even more successfully. Mr. Wade spoke of the early experience of the Fat Stock Show ; his work with the Association had been a labour of love ; he had no idea that the show would remain in Guelph unless the attendance increased. Only $112 had been taken in that day ; the farmers around Guelph are the most quiet, unassuming lot he had ever heard of ; they never showed up. Mr. Mutrie thought every farmer should be a member of the Fat Stock Club. Mr. Duff referred to the great amount of money handled by the stockmen of Guelph. Mr. Johnston rathered favored a perambulating show as a means of education. Rev. W. F. Clarke spoke from his long and intimate knowledge of the work of the Agriculture and Arts Association. Mr. Innes touched on the increased accommodation this year, and the great success of the show of live poultry.

The proceedings were wound up about 9.30 by the singing of God Save the Queen.

INTERVIEW WITH THE GOVERNMENT.

December 31st, 1892.

A meeting of the Executive Committee and the Chairman of the Finance Committee was called by order of the President to wait on the Premier and Council of the Provincial Government.

The deputation consisted of the following gentlemen, Jonathan Sissons, President of the Agriculture and Arts Association ; N. Awrey, R. McEwen, J. C. Snell, A. Rawlings, and H. Wade.

The President explained to the Government that owing to the fire on the 3rd of March last, in which the valuable building belonging to the Agriculture and Arts Association was totally destroyed, losing the rent of which made a difference of $2,000 in the receipts, and also to the failure of the Town of Gananoque in meeting its obligations in connection with the Dairy Show, this Association was behind to the amount of about $2,400, and this deputation now waited on the Government to ask that a grant of that amount be made to enable the Agriculture and Arts Association to

meet its liabilities. He further stated that as the Government had now fallen heir to the Association's property on the corner of Queen and Yonge streets, worth $100,000, they were in duty bound liable for this amount.

N. Awrey, Chairman of the Executive Committee, also spoke on the same grounnds.

The Government at once passed an Order-in-Council granting the amount asked for.

LAST OFFICIAL MEETING.

On the 16th of January the Executive Committee and Chairman of the Finance Committee were again summoned by order of the President to accept the auditor's statement and hand it over to the Government, this being the last official meeting of the now defunct Agriculture and Arts Association.

Present: J. Sissons, President, in the chair; J. C. Snell, Snelgrove; R. McEwen, Byron; Joshua Legge, Gananoque; R. Rawlings, Forest, and H. Wade, Secretary.

Statement of receipts and expenditures of the Agriculture and Arts Association for the year 1895, as presented to the Executive Committee:

Financial Statement.

Cash on hand and receipts from all sources.....	$39,507.38
Expenditures for all purposes.....	39,248.69

The Executive Committee further report that after closing the fifty years' work of this Association, they find from the Treasurer's statement as audited, that they can place to the credit of this Province herd books and office furniture to the value of over three thousand dollars, and a property yielding an annual rental of four thousand dollars.

Mr. Legge then presented the claims made by the Horticultural Society of Gananoque, amounting to $360, not settled at the Guelph meeting.

On motion of R. McEwen, chairman of the special committee appointed at Guelph, seconded by A. Rawlings, it was resolved that the amount of $235 be paid on the Gananoque claims to Mr. Legge, the special committee not considering that this Association is liable for $125, rent for the grounds.

Moved by R. McEwen, seconded by J. Legge, That the treasurer be paid the amount of $50 extra for additional services in 1895. Carried.

HACKNEY HORSE ASSOCIATION.

The annual meeting of the Hackney Horse Association was held in the Albion Hotel, Toronto, on May 4th, 1895, at 2 o'clock P.M.

Members present:—Robert Davies, President, Toronto; H. N. Crossley, Rosseau; R. Miller, Brougham; John Holderness, Geo. H. Hastings, John Kemp, Toronto; A. E. Major, Whitevale; Geo. Pepper, Toronto; R. Beith, M.P., Bowmanville; N. Awrey, M.P.P., Hamilton; and H. Wade, Secretary.

The minutes of the last meeting were read and confirmed.

Secretary's Report.

The Secretary also read his report, which was adopted:

Our meeting is called this year somewhat later than has been customary, as the Horse Show, which has been held so successfully in this city, took up much of the time of the exhibitors and officials that it was not thought fit to call it at that time.

Our last year has been fairly successful, and the Canadian Hackneys have come well to the front at the various shows held in 1894; they have also materially assisted to make the Canadian Horse Show, just concluded, a marked success.

The American and Canadian papers have been full of praises for this the first combined effort of the breeding and driving classes to hold a first-class show. As you all know, the Spring Stallion Show for the breeding classes was started several years ago by the Clydesdale Horse Association, the first one being on the Market Square, since then in the old Armouries, and it has always been successful. A few years ago the Agriculture and Arts Association joined in giving prizes for all the prominent breeds. Many a prominent battle of exhibitors has been held in the old armouries, and many a horse was sold there. The building was always too small, and the management was prevented from giving premiums to anything but the breeding classes. I have for three years back visited the New York Horse Show, and last December wrote a short report of it for the *Farmers' Advocate*, and I see by the last edition of that paper that they publish my forecast as the heading of their article on the Canadian Horse Show. It is as follows: "If we can obtain the Toronto new Armouries for our next Spring show, and ask the assistance of the Toronto and Provincial horsemen, there is nothing to hinder us in the near future approximating the success of this wonderful show."

This year has proved my prophecy, as we have succeeded in making a new departure in joining with our Country and Hunt Club friends, and we sincerely hope that this combined show of the breeding, saddle and harness classes has come to stay. Should our country exhibitors think they are to be left in the back ground, we would call their attention to the fact that we have to cultivate the breeding classes in order to raise the harness classes. One of our city sporting papers thinks that the Clydesdale classes should all be shown before luncheon as the ladies found it irksome to gaze on them so long. Now this is a great mistake, as I am quite sure the interest taken in this class was great, and as to the Hackneys they could not be shown too often to please the crowd.

An American writer says that the Clyde class of fifteen aged ones would be drawing card in New York. We can improve next year in adding to the catalogue the address of the stables in which the horses are quartered in order to allow visitors a chance to see them in their temporary homes.

Since the holding of our last Directors' meeting the Agricultural Hall, at the corner of Queen and Yonge streets, so well known to all horse and cattle men, has been destroyed by fire, and the minute book and set of English hackney stud books perished in the flames. Fortunately a condensed summary of our meeting has been published by the Agriculture and Arts Association, so I am able to cut them out and reproduce our minute book, but I am not so fortunate with our members' list and cash book, but as near as I can remember the following is our

FINANCIAL STATEMENT FOR 1894.

Receipts.

Jan. 1, '94—To cash	$55 00
Special prize, H. N. Crossley	50 00
Cash, inspection fees	85 00
" 26 members, as near as I can remember	130 00
	$320 00

Expenditure.

September—By cash to Industrial Exhibition, special	$60 00
H. N. Crossley, special	50 00
Inspection fees	48 00
Registration fees	16 00
Cash on hand	146 00
	$320 00

GEO. PEPPER,
Auditor.

At a special meeting of the Directors of the Hackney Horse Association, held in Toronto on February 21st, there were present: Mr. R. Davies, President; Mr. R. Beith, First Vice-President; Mr. James A. Cochrane, Compton, Que, Second Vice-President; and Messrs. John Kent, Toronto; Robt. Graham, Claremont; H. N. Crossley, Rosseau; Geo. H. Hastings, Deer Park; John Holderness, Geo. Pepper and Robt. Bond, Toronto.

Mr. H. N. Crossley, of Rosseau, was appointed a delegate to confer with the Agriculture and Arts Association in regard to arrangements for the Spring Horse Show. A resolution was passed granting $30 out of the treasury for a sweepstakes at the Spring Horse Show for the best Hackney stallion of any age; also $30 for the best high stepper, gelding or mare, sired by a registered Hackney stallion. To this the Agriculture and Arts Association have added a second prize of $15.

At the special meeting Messrs. Crossley, Graham and Holderness were appointed a committee to raise subscriptions amongst the hotels and business people of the city. They were fortunate enough to raise the sum of $240 all told, so another meeting was called and three additional classes were added to the premium list, amounting to the sum of $235. It was also decided to give $30 as a special at the Industrial Exhibition and $25 to the Western Fair at London for the same purpose.

I am sorry to say that the semi-centennial year of the Agriculture and Arts Association is its last. It is legislated out of existence with all its useful machinery for holding exhibitions and registering live stock; the registrations will go on the same, but each live stock association will fall heir to its own herd and stud books; all fees collected for membership and registration purposes will be the property of the association or society to which it belongs, and an assessment at the end of each year will be made for the work done for each society; this will come in force on the 1st of January, 1896. We will miss the machinery of the old association the most in holding exhibitions. The only way that I can see for horsemen to do in the future is to form a horse breeders' association, the membership to consist of two or three delegates elected by each branch society to the board of the horse breeders' association, and an annual fee to be paid the central association by each society. This central association could take up all work in which they all have a common interest, such as asking the Government for a grant for show purposes, and work of this description. I think this would be the proper way to constitute such an association, otherwise the friends of one society might get too many delegates on the board. We have at present four different horse associations in Ontario, viz, the Hackney, Clydesdale, Shire and Trotting Horse Associations, and a few more might be formed. Two delegates from each association would make quite a working board, sufficient for managing any horse show that might be in prospect, so it would perhaps be as well to appoint two or three delegates to-day from this society.

Election of Officers.

Mr. Davies suggested that, having been President for two years, some one else be appointed. It was also decided to appoint a Second and Third Vice-President. The following officers were then elected:

President: Mr. Robert Beith, M.P., Bowmanville, Ont.

1st Vice-President: Mr. H. N. Crossley, Rosseau, Ont.

2nd Vice-President: Mr. Geo. H. Hastings, Toronto, Ont.

3rd Vice-President: Mr. A. G. Ramsay, Hamilton, Ont.

Vice-Presidents for other Provinces: Quebec, James A. Cochrane, Hillhurst; Nova Scotia, J. B. McKay, Stellarton; New Brunswick, Hon. D. McLelland, St. John; P. E. Island, C. O. Gardiner, Charlottetown; N. W. T., W. Bell Irving, Cochrane, Alta.; Manitoba, J. Rutherford, V. S., Brandon; British Columbia, S. F. Tolme, Victoria.

Directors: Messrs. Davies, Miller, Bond, Graham, Awrey, Holderness, Kemp, Major and Pepper.

Representative to Toronto Industrial: Mr. Henry Wade.

Auditors: Same as before.

Inspector for Muskoka and Parry Sound: Mr. H. N. Crossley.

Inspector for Paris District: Mr. Wilson, Paris, Ont.

Moved by G. H. Hastings, seconded by Robt. Miller, "That we, the directors of the Canadian Hackney Horse Society, do respectfully request that the directors of the Industrial Exhibition Association will take into consideration the advisability of granting to this society a second representative upon its Board of Delegates. In support of the request we would beg to point out that since 1890, the year in which this popular breed of horses first started into prominence in this country, the Hackneys have advanced in public favor to such an extent that not only were the entries in the thoroughbred Hackney classes at the exhibition of 1894 equal in number to those of any other recognized breed of horses, but there was no single section of the class which did not call forth at least two representatives of the breed. Further we would point out that eight other purely breeders' associations have double representation on your Board of Delegates, and it is only fair to the Hackney breeders, in consideration of the pecuniary assistance which you have received in the past from this society and on account of the importance of the breed which attracts large numbers of interested farmers to your annual exhibition, that our representation should be duplicated."

After a short discussion it was decided to appoint two judges for Hackneys at the Toronto Industrial. The following were then selected: Mr. Richard Gibson, of Delaware, and Mr. Robert Miller, of Brougham.

Mr. Geo. H. Hastings, of Deer Park, then read the following paper:

EARLY HACKNEY SIRES AND BREEDING CARRIAGE HORSES.

It may interest many who are fond of the horse, the noblest of the brute creation, be he race horse, hunter or carriage horse, to know something of the origin of the Hackney breed. The object in view in this article is to give a brief history, since the early part of the last century, of the Hackney, tracing him back to the two counties, Norfolk and Yorkshire, which counties may be credited with establishing the excellence of the breed, and are entitled to claim all the credit due for fostering and improving an animal which has beyond doubt proved to be perfection in its kind.

It is not necessary to record particulars of the Hackneys' back breeding prior to the reign of Queen Anne, although there is much historical interest to be found in the old chronicles dated back centuries before the accession of that horse-loving monarch to the throne. Suffice it to say that down to about 1,700 there had been hundreds of eastern stallions called Arabians, Barbs and Turks imported into England, and they were crossed with the race horse of the period, with mares in common use in the country, and in Norfolk with the strong, active, trotting, general purpose mares peculiar to that county, which imported to the progeny, size, quality, symmetry and elegance of form.

"The Druid," in his *Post and Paddock*, published in 1862, says: "About a quarter of a century since Norfolk had an almost European fame for its strong, short-legged Hackneys, which could walk five miles an hour and trot at the rate of twenty."

We also learn from Marshall's *Rural Economy* of Norfolk, published in 1795, that the county in question possessed before Queen Anne's reign an active breed of horses upon the farm which could not only trot when used for ordinary purposes on the roads, but could also gallop in teams when tested in races which were then resorted to for public amusement. The number of horses harnessed together in a waggon was invariably five; whether upon the road or on the farm, it was a common practice for the horses to trot with empty waggons.

Agriculture in Norfolk has for centuries been in advance of that practised in most other counties in England; and horses were employed in Norfolk for purposes of husbandry when in all other countries the work was done by oxen.

It is, however, to the importation of the Darley Arabian in 1706, during the reign of Queen Anne, that nearly all the Hackney sires of to-day can be traced back without a flaw.

The home of the Darley Arabian when first imported into England was at Aldby Park, near York, the seat of John Brewster Darley, Esq.

In nearly all the Hackney pedigrees of to-day the foundation sire will be found to be the Darley Arabian, who begat Flying Childers, foaled in 1715, and as his breeding on the dam's side may be of interest it is given as follows: Flying Childers, dam Betty Leeds by old Careless; grand-dam, own sister to Leeds by Leeds Arabian; great grand-dam, Mr. Pelham's Spanker; great-great-grand dam, Lord Fairfax's Morocco, Barb mare, which was Spanker's dam. From this pedigree it will be seen that Flying Childers was closely inbred. He proved himself an impressive sire and the fleetest horse upon the turf prior to his great grandson Eclipse, who is supposed never to have been equalled. Flying Childers was the sire of the race horse Blaze, foaled in 1733, who begat the Hackney stallion Shales, foaled in 1755, and from him descended, in a direct line, the celebrated Hackney sires, to be found in the Hackney Society Stud Book, viz: Driver, foaled 1765; Fireaway, foaled 1780; Fireaway, foaled 1815; Wildfire, foaled 1827; Phenomenon, foaled 1835; Performer, foaled 1846; and Denmark foaled 1862. Bellfounder, foaled 1816, imported to the United States by James Pratt, July 11th, 1822.

The progeny of Denmark is known all over the world through his son Danegelt, who is the sire of Matchless of Londesborough, Ganymede, Lord Wilton, Lord Bardolph, Saxon, General Gordon, Astonishment, and others too numerous to mention.

It does not appear that Yorkshire made use of the Darley Arabian, except to breed for the turf, and his success in this direction was great, as he sired Flying Childers and Bartlett's Childers. From these two sires are descended the thoroughbred horses, Blaze, Snip, Snap, Sampson, Eclipse and many others, and through the blood of these latter our speediest race horses of to-day have established their fame.

Although many Arabian stallions found their way into England between 1750 and 1800, the infinite superiority of the "Old Eastern Sires"—the Darley Arabian imported in 1706 and the Godolphin Arabian about 1730—has been incontestably manifested; and it is remarkable but nevertheless true that these two animals not only founded the English race horse or thoroughbred, but also the Hackney breed.

The same may be said of the Darley and Godolphin Arabians in laying the foundations of the American trotter and the American race horse; the former through Messenger, son of Mambrino, bred by Lord Grosvenor and imported into America in 1786. There is not a single trotter, not even the celebrated Maud S., Nancy Hanks and Alix, which does not date its origin back to Messenger or Bellfounder; while the old breed of American race horses goes back to Shark, who, after winning five single matches of 1,000 guineas each and upwards of 20,000 guineas in stakes, including the Clermont cup, the whip and eleven hogsheads of claret, upon the English turf, went to America in 1786 and died in 1796 in Virginia, in which state he conferred the greatest benefit upon the American turf by introducing the famous Snap blood.

Although Yorkshire had been for centuries a great horse-breeding centre, no improvement of the stock was brought about by the introduction of Hackney blood. It had been partially ignored until about fifty years ago, when Mr. H. R. Phillips persuaded Mr. Robert Ramsdale to permit him to buy for him Norfolk Phenomenon. Mr. Phillips perhaps knew more about horses than any other living man, having been the largest horse dealer in England, buying for fifty years most of the horses for the army and the crowned heads of Europe, particularly for the Emperor Napoleon III., who, through his master of the horse, General Fleury, aided by General Faverot de Kerbreeg, had collected at the Tuilleries and at his other establishments in France the finest stud of carriage and riding horses in the world. It was upon a visit to Mr. Phillips' house in Wilton Crescent, Belgrave Square, London, in the year 1883, two years only before his death, that he gave the following account: "The horses in Yorkshire were not good enough for the London trade, and about the year 1838 I purchased from Mr. John Bond, of Cawston, Norfolk, the celebrated sire Phenomenon for Mr. Robert Ramsdale, of Market Weighton, Yorkshire. I reckoned him at that time the best stallion in England. In height, fifteen hands, two inches; on well-formed, short legs, good feet, deep girth, quarter symmetrical, full of courage, with wonderful all round true action; and Phenomenon proved a valu-

able sire, as the Yorkshire mares, although sizeable, lacked girth, symmetrical form and action The stallions in use at that time in the district of Market Weighton were very inferior and leggy."

In conclusion, Mr. Phillips said all that he had anticipated had been fully borne out, as the crossing of the blood of Phenomenon with the Yorkshire mares had improved the Hackney breed in size and for general usefulness. This has now been accepted by the Norfolk breeders, who are making free use of the descendants of Denmark, a sire only three removes from Norfolk Phenomena. The stallions of this improved Yorkshire blood are now being crossed again with the old Norfolk mares with great success.

It was through the introduction of the race horse Blaze, the son of Flying Childers, that the county of Norfolk became pre-eminent for the breed of Hackneys. From old records, which have not hitherto been quoted, I find that Thomas Panton, Esq., a Cambridge gentleman, owned Blaze, who won for him several four-mile races on the turf between the years 1738 and 1743, carrying the great weight of twelve stone, and he stood for service at Newmarket. He was the sire of the original Shales, foaled in 1755 out of a Norfolk mare, and his introduction into Cambridgeshire, the adjoining country to Norfolk, will account for the blood of the Darley Arabian through Flying Childers, finding its way into the eastern counties.

There is no doubt that the nation owes a deep debt of gratitude to those breeders in Norfolk and Yorkshire for what they accomplished in the past, as with the Hackney we are in the position to supply our present wants and to maintain our supremacy in the world for producing the best carriage horses.

There are plenty of animals being bred in the country, but unfortunately for the most part upon wrong lines. What is wanted for harness work are sizeable, symmetrical, upstanding, true actioned, well balanced horses, which will bear themselves gaily in good bending form and be able to go on.

The value of the Hackney breed to supply the want I will again put forward. The Hackney sire having much thoroughbred blood in his veins cannot be too much recommended. From his use upon sizeable Hackney mares, or big, roomy, thoroughbred mares, will result increased size and vigor in the produce, besides the inherent, elegant deportment, together with the good temper and graceful manners of the Hackney.

To describe the sire to be used for the purpose of breeding upstanding carriage horses, I would say select one typical of the Hackney breed, size not to exceed fifteen hands, two inches; head not to be too small, but broad between the eyes; the neck springing well from the shoulder, and masculine—not tapering or peacocky as it approaches the head; shoulders deep and well set back into the loins; back not too short or cob-like; ribs well arched; hind quarters broad and masculine; thighs well let down to the hocks, which should be large and flat; knees with plenty of muscle; cannon bone short; pastern joints large and deep set; feet not small and deep in hoof. He must move straight in the walk, and trot with true direct action before, also moving well behind; and finally should have the electric fire and animation which no other horse possesses in a like degree.

In this brief suggestion as to the breeding of Hackney sires, I think I have shown the justness of the claim to call them "Thoroughbred Hackneys," quite equal in rank to that of the "Thoroughbred Race-horse."

"Thoroughbred" and "Hackney" Type.

As we have already observed, at a certain stage in the history of both the Thoroughbred and Hackney horse, there was infused into each of their veins a large quantity of the same Arabian blood. The two classes, therefore, became closely related, were not dissimilar in general type, though the Hackney was much stronger, and both partook somewhat of the Arabian stamp. But, as they were to be developed for very different purposes, it is natural that during this development they should diverge from each other as regards shape, etc., and that both should grow more or less away from the original

Arabian type. It is thus most interesting to compare our present day thoroughbred and Hackney respectively alongside one of these original Arabian sires. In each case there is easily traceable the natural developments towards the end sought after. On the one hand, all that the lover of the thoroughbred cared to have from these eastern horses was more racing qualities. Give him more speed and he would willingly sacrifice every other point. No one can deny that he has been eminently successful, for by drawing into one focus every drop of racing blood that could be found in these Arabs, and fostering it, we have now as a result the long, high, thin, greyhound-like Thoroughbred—certainly a great deal removed from the beautiful Arabian proportions, but nevertheless unequalled in the world for speed. On the other hand, the development of the Hackney has not been nearly so exclusive. This has all along been considered as the animal of general use. It has had to turn itself to everything that might be asked of it, and the consequence is that it has developed itself more fully all round. So, likewise, was the Arab a horse of general use. It had none of its qualities driven to extremes, and hence the reason, I believe, why it maintained that natural and graceful beauty we all so much admire. It certainly possessed great swiftness but this quality was not allowed to usurp all others. The Arab was preserved in its all-round usefulness, and one part so balanced with the other as to give us this perfect symmetry. Now, if we compare our modern type of the Hackney with any of these Arabian sires we find that in general outline they are very similar. There is the same graceful curve from ear to tail. The same round barrelled ribs, the same flat, short legs, and often the same sweetness of manner and temper. Only, of course, our Hackney is built on a stronger frame, and, I think, has more fire and "go" with it. And it must be evident to every unbiased mind that the modern type of the Hackney is a much more truthful reproduction of the old Arabian than the modern Thoroughbred. With the former the twin properties of use and beauty have never been lost sight of, while in the latter that of beauty has been entirely sacrificed to speed. Now, what I contend for is that if there be any light-footed British horse at the present day that can lay claim to purity of blood through its connection with the Arabian, certainly that horse as much, and perhaps more than any other, is the English Hackney. Thoroughbreds have a long pedigree to prove their connection with the worthy old Arabs. Hackneys also have as reliable a pedigree to prove that same connection, but they have more—they still bear the stamp and retain the characteristics of these old imported sires. So I trust our thoroughbred friends will learn to know that a horse is not to be called half-bred merely because it does not stand on high legs and possess long, greyhound shapes. They must be taught that usefulness and beauty may possibly be co-existent with purity of blood.

A Glance at a few of the more important Hackney Strains.

Let us now glance for a little at a few of the more important Hackney strains, as we find Mr. Euren has compiled them in the stud books. And here let me say, that no lover of the nag can ever be too grateful to Mr. Euren for the most valuable records he has thus placed at our disposal. Few could have had the ability and patience to do such a work, and had it not been a labor of love it could never have been completed.

The Hackney Stud Book practically commences with "Blaze," the sire of "Shales the Original," who was foaled about 1755. According to the stud book "Blaze" is a pure-bred eastern horse, and was closely related to a mare known as "Bright's Roan Mare" who must have had a considerable influence on the early Hackney breed, as we find a great many of them partook of her strong stamp, her roan and color. And it is evident also that there must have been a very strong element of trotting blood in "Blaze" as we find the trotting quality appearing again and again, particularly in the American horse "Messenger," who was immediately descended from "Blaze," and who laid the foundation of the now famous fast trotters on the other side of the Atlantic. Of "Blaze's" son, "Shales the Original" (699), the real father of the Hackneys, we have not much record. As I have said, he was foaled about 1755, and we find the Norfolk and Lincoln dealers about this time giving from forty pounds to one hundred and fifty pounds for good trotters, considered to be of his blood. Of old Shales' progeny two stand in particu-

lar prominence, viz.: "Scot Shales" (692) who was foaled about 1762, and was the sire of many noted horses, and "Driver" (187), who was the sire of "Jenkinson's Fireaway" (201), a famous horse foaled about 1780, in color a bright chestnut and sire of "Wroot's Pretender" (596), who was sire to the much-famed "Ramsdale's Performer" (547). It is to this famous old horse that a great many of the best Yorkshire and Norfolk strains go back, and especially do the Yorkshire owe much of their quality to him, for he was the sire of "Black Rattler" (82), and "Lund's Merryleggs" (449), two of the chief sires in this particular strain of the Yorkshire Hackney. But another strain of even more importance, I think, came from the above mentioned "Jenkinson's Fireaway" (201), viz.: "West's Fireaway" (203), who was grandsire to "Wright & Goald's Norfolk Cob (475), who in his turn was sire to "Bond's Norfolk Phenomenon" (522), the most famous of all Hackney stallions. This horse, says an old record, "is allowed by all competent judges to be one of the best and fastest trotters ever shown in any public market. From his superiority and muscular strength, reach and rapidity of action, it is doubted whether there be a horse in England that can go with him." He was foaled in 1824, was a red roan with black points and stood 15.2 hands high. His dam was a trotting roan mare of the other line of "Jenkinson's Fireaway" (201), viz.: "Read's Fireaway" (202) by "Wroot's Pretender" (596). The "Norfolk Phenomenon" blood was spread right over the Hackney counties. Commencing in Norfolk he travelled northward through Lincoln, Yorkshire, etc., and latterly died in Edinburgh about the year 1850. We cannot speak in two high terms of this valuable horse, as we find that those who have the honor to claim kin to him are most eagerly sought after and can bring any money. I think I am about right when I say that nine-tenths of the prize Hackneys of the present day owe their prominence to him, in Norfolk as well as Yorkshire. Particularly is this the case when there is the union of the "Norfolk Phenomenon" strain with that of his near relative "Ramsdale's Performer." Thus in Yorkshire we have on the one hand old "Triffit's Fireaway" (249) as well as "Lord Derby" (417) inbred to "Bond's Norfolk Phenomenon," and on the other hand we have the famous old "Denmark" (177) inbred to "Ramsdale's Performer," and it is when these two strains are united that we generally see the "red tickets" carried off in the show ring And in Norfolk there is very much the same report. Bond's "Norfolk Phenomenon" is a progenitor to all the leading sires of the present day—for example, "Confidence" (158), "Norfolk Gentleman" (492), and "Great Shot" (329)—and, when these are mated with some of the Yorkshire strains of the "Ramsdale's Performer" order the result is invariably a happy one—as we had this year in "Edgmont," "Star of Mapel" and "Field Marshal," the first prize yearling colt at London, who was bred and owned by H. R. H. the Prince of Wales. I would warmly recommend all young Hackney breeders to procure as much of the union of these bloods as they can possibly get, and I am sure they will find it to be a safe and valuable investment.

The "Norfolk" and "Yorkshire" Type of Hackney Compared.

It might be well here to say a little on the difference between the Norfolk and Yorkshire stamp of Hackney. The former, as compared with the Yorkshire, always seems to me a much heavier horse, longer in his barrel, rounder in the shoulders, which, however, are as a rule better laid back. He is also plainer about the head, but has generally more action, particularly behind. These differences I believe to be the result of more of the old British blood being retained in the Norfolk Hackney, as we find that about the middle of last century trotting matches were greatly in vogue all over this district, and, as I have already observed, the first cross was between "Blaze" and a trotting mare. Besides, I am of opinion that Norfolk and Lincoln will naturally grow a larger animal than the Wolds of Yorkshire.

There is no doubt that the Yorkshire breeders were greatly indebted to the Norfolk stallions that entered their provinces towards the end of last and the beginning of this century, but the class of mares these came in union with would, I think, be finer and purer eastern blood than even the stallions themselves, for, as we have already observed, there had been imported into Yorkshire during the first ten or twelve years of last century some

twenty or thirty pure Arabian stallions, and even "Blaze," father to "Shales the Original," was grand-sired, and great grand-sired by two of these very Yorkshire imported Arabians, so that, while the Yorkshire breed was indebted to Norfolk at the beginning of this century, the latter was first indebted to the Yorkshire for giving them the start. And there is no doubt that the above circumstances have been a very great factor in making the Yorkshire Hackney what it certainly is, a lighter, finer qualitied, better riding horse than the Norfolk. The latter, as I have said, is heavier, has more show and at the present day is perhaps more marketable. But I really think the Yorkshire is truer to the eastern type, and when Hackneys are more and better known will be the sort preferred.

Some of the Properties and Uses of the Hackney.

Before dealing with the question of whether it would pay to breed Hackneys it will be necessary to glance at some of the uses and properties attaching to this class of animal. We know that for several centuries at least there has been a distinct type of horse called the "Trotter," "Hackney," or other such distinguishing names, and that from the time of the Saxons (who were the first to give him the name of "Nag") down to the present day he has been recognized as the horse of general use, not the racer nor the hunter, but the "maid-of-all-work" horse. True it is that we perhaps hear most of him as a trotter, accomplishing very long journeys in marvellously short spaces of time, but we must not infer from that that he was an animal kept exclusively or even largely for trotting matches. The old English squire and farmer kept him for use. He was one of the most indispensible of creatures in the old days, and we value those old trotting records as sort of watermarks, showing us to what exceeding high degrees of speed and durability he had attained. Did time permit I might read you a long list of feats done by the Hackneys in former days, showing the great distances they could trot under a heavy weight and in an incredibly short time. Mr. Euren, in his introduction to the Hackney Stud Book, tells of a mare that on April 24, 1820, trotted on the Ipswich Road 100 miles in twenty minutes over the eleven successive hours, carrying twelve stones the first fifty and seven stones the second fifty miles. Also of a mare of the old "Jenkinson's Fireaway" breed that on April 27th, 1832, trotted 100 miles in nine hours, fifty-six minutes, fifty-seven seconds. "At the end," says the report, "she showed no symptoms of fatigue, and on entering her stable began to eat her hay as if she had only come off a moderate stage. After resting an hour she was gently walked to her training stable, a distance of seven miles." Such is the stuff, you see, of which the Hackney horse is composed, and that these qualities of extraordinary endurance are not disappearing in the modern Hackney I have had ample experience to prove. I have known of this mare carry one 106 miles in a day, and at night trot into the yard neighing and snorting almost as if it were morning. One very characteristic feature in every true Hackney I have driven is that they do not need nor will they tolerate to be touched by the whip. They will willingly trot "up hill and down brae," in fact the trouble often is how to get them to take it easier. But they are too anxious in themselves, too sensitive and proud to ever think of standing the lash. You may take it as a very safe rule that when they need or tolerate to be whipped on they are not of the true Hackney blood. Now, one may ask what reason there is that the Hackney, more than any other animal, should possess such qualities of pluck and endurance. But the explanation is not far to seek. A race of horses, as a race of men, will not endure long years of constant hard work without developing qualities to cope with and overcome those necessities, and the fact that for hundreds of years the Hackney has had to do all the hard road journeying, and to do it cleverly, has developed in this breed a quality of nerve, a firmness of muscle and sinew, a hardness of hoof and formation of foot, legs and body generally, which no horse without a similar past experience can possess, and which fact I contend gives to the Hackney the claim to be called the horse of the greatest pluck and of the vastest staying powers in the world, and there is a lesson here for those of us who breed this class at the present day. We must not forget that what the Hackney is it is by virtue of the constant work and activity that have always been its lot, and if we would have it preserve the precious qualities it has thus inherited, we must see that the sires and dams get sufficient work to develop the necessary muscle. If we keep the sires mostly indoors,

and continue to breed from mares whose only exercise has been "at the grass," then depend upon it, the characteristic features of the Hackney will sooner or later disappear. We may produce good enough shapes but the extraordinary staying power, the hard muscular nature and active nervous temperament will be sacrificed. These were created by work, and will alone be preserved by it. It is a remarkable fact that all the most famous sires are the progeny not of mares always kept exclusively for breeding, but of mares which had to do the work of an ordinary horse, and thereby developed lots of muscle and power. It is noteworthy, too, that sires produce better stock after several years of hard exercise, and these facts are most important to observe when collecting stock for breeding purposes. Get in behind a fine nag on a summer's day, and, reins in hand, you will soon leave all business' cranking cares behind and enjoy a relief that no other exercise can give. But his first place of excellence, I think, is a riding Hack. Get across a fine-qualitied, pure-bred nag, and you will feel under you such a life and sprightliness and vigor that you almost partake of the horse's qualities and think yourself lord over all. His response is so sharp, his walk so elastic and full of life, his half prancing dancing movements so delightful that an hour across such an animal affords the keenest enjoyment.

As to the class of mares to be recommended, for my own part I prefer them of the "Fireaway" (249) blood or very well bred Norfolk mares with plenty of strength and "go." Then for a sire to cross with these he should be of the old "Denmark" (177) strain, and if this is done I am sure the result will be satisfactory. Now in answer to the question whether breeding Hackneys pay, we might do well to observe for a little our friends across the border. I know that I am within the mark when I say that in England at the present time a number of Hackney sires are each netting to their owners over £1,000 every year, and I know that for the last fifteen years four or five horses have each brought to the district in which they travelled over £6,000 per annum, and such large sums of money coming into small districts in the corner of a county each year in succession is surely of immense benefit to these parts.

No one can fully estimate what "Denmark," Trift's "Fireaway" and "Lord Derby" have done for Yorkshire these last twenty years, and in Norfolk old "Confidence" (D'Oylys) is said to have paid the taxes of several parishes and has been a gold mine to his owner and produced more prize winners and high action horses than any other sire.

Conclusion.

But it must have been apparent to all who go out and in among the Norfolk and Yorkshire breeders that there is something attaches these people to their Hackneys far beyond the mere money value. Nor is it the high trotting record they may have made, nor the numerous prizes they may have carried from the show yard. There appears to be some fascinating quality in a Hackney that creates in those who work with him a feeling of the deepest attachment. Where this power comes from would perhaps be a difficult question for anyone to answer, but certain it is that the Hackney men have a real affection for their animals. Why, I have heard some of the old farmers in speaking of a favorite horse grow so earnest and enthusiastic that one might think they were recording the achievements of their own noted grand-sire, and on such occasions words are not half eloquent enough. They will jump to their feet and in the greatest glee strut up and down the room in imitation of the extraordinary style and "go" of their old horse. Such admiration and attachment are most pleasing to see, and this power in the Hackney to draw forth the affections of man must be a survival, I think, of that power the old Arabian had to insure always the love and devotedness of its master.

To give you an example of the veneration in which some of these old Hackneys were held I will read you an incident in the life of the famous old "Marshland Shales" (435), which is quoted by Mr. Euren in his introduction to the Hackney Stud Book. "Marshland Shales" died in his thirty-third year and was in his thirtieth at the time of this incident. The writer is describing the old city of Norwich so well known to him as a

youth, and goes on to say: "I was standing on the Castle hill in the midst of a fair of horses. . . An old man draws nigh, he is mounted on a lean pony, and he leads by the bridle one of these animals (horses); nothing very remarkable about the creature unless in being smaller than the rest, and gentle, which they are not. He is not of the sightliest look, he is almost dun, and over one eye a thick film has gathered. But stay; there is something remarkable about that horse. There is something in his action in which he differs from all the rest As he advances the clamor is hushed. All eyes are turned upon him, what looks of interest, of respect, and, what is this? people are taking off their hats, surely not to that steed? Yes, verily! men, especially old men, are taking off their hats to that one-eyed steed, and I hear more than one deep-drawn 'Ah.'

"'What horse is that?' said I to a very old fellow, the counter-part of the old man on the pony, save that the last one wore a faded suit of velveteen and this one was dressed in a white frock. 'The best in mother England,' said the very old man, taking a knobbed stick from his mouth, and looking me in the face, at first carelessly, but presently with something like interest; 'he is old, like myself, but can still trot his twenty miles an hour. You won't live long, my swain, tall and overgrown ones like these never does, yet, if you should chance to reach my years you may boast to thy great grand-boys thou hast seen Marshland Shales.'

"Amain, I did for the horse what I would neither do for earl or baron—doffed my hat; yes, I doffed my hat to the wondrous horse, the fast trotter, the best in mother England; and I, too, drew a deep 'Ah!' and repeated the words of the old fellows around, 'Such a horse as this we shall never see again, a pity that he is so old.'"

Such a horse, then, is this "Hackney" I have been trying to describe to you, and should it be introduced largely into Canada I feel certain that it will not only pay farmers and other breeders, largely improve the horse service of our country, but almost add a new social feature to our life.

A MISTAKEN IDEA.

Mr. Geo. H. Hastings, of Deer Park, also read the following paper:

One thing I feel is an absolute mistake in the present breeding of carriage horses, and that is the use of Thoroughbred sires. Now when I say this, I must beg the readers of this article not to rush to the conclusion that I am antagonistic to either the thoroughbred horse or the hunter. Far from it; I am an immense admirer of both, but in their proper sphere. In Scotland, where packs of hounds are few, and where, in those counties in which they do exist, we find nearly all the hunters, who have any right to the name, or of any value, brought from either Ireland or England, the inducement to breed for that branch of the trade must be exceedingly small. "That is all very well, and in only too many cases I must admit it," says the hunter breeder, "but if my horse does not make a good hunter I can sell him as a carriage horse."

And there is where the great mistake in breeding carriage horses is made. For if a horse is bred for a hunter, but from lack of courage, speed, or the hundred and one things which are necessary in a good hunter, just misses the mark, he, in ninety-nine cases out of a hundred, becomes a unit of that vast multitude of from £40 to £45 horses, which at the present day are the hardest to dispose of. And why should this be so? Simply that from want of *action* he cannot command a fair price.

It is the same in horse breeding as in every industry; one must work with a distinct aim and object in view. Haphazard breeding can never pay.

Looking at the advantages to be gained, as a rule, in breeding harness horses instead of hunters, it would seem much more advisable to breed for the former and in a case where the action failed, which I do not think will occur often when a high-stepping Hackney sire is used, there would be a chance of the produce becoming a fair hunter.

And here I would raise a word of protest against those who say that a high-stepper is an uncomfortable hack.

In making this assertion they tell but half the truth, which is often more misleading than stating what is not the truth at all; for though a horse that goes high in front but drags his hind legs, or that goes "big" behind and does not bend his knees in the same proportion, is uncomfortable—a true going Hackney, *i.e.*, one that goes well and evenly, both in knees and hocks, is not all so, but is, in most cases, a *very comfortable* and *safe hack*.

HACKNEYS IN 1894.

The Hackney Society's tenth London show was held on the lines which distinguished the earlier displays from those in more recent years. The exhibition being thus wholly under the control of the Hackney Horse Society, no time was lost in getting to work on the Hackney classes. This was one of the desirable consequences of the 1893 show held by the Royal Commission on Horse-breeding and the Hunters' Improvement Society, in conjunction with the Hackney Horse Society, exceeding the capacity of the Royal Agricultural Hall. The other sections of the horse show's display had their turn in the third week. Four days' work were, however, set down as the programme of the Hackney week, and the judging extended into the third day. Moreover, the Society tried the experiment of providing classes for geldings of both three and four years, and increased the total value of the prizes to £1,000. The result of the experiment is said to have been equal to the expectations that had been formed.

It may be that in future years when there is a full realization of the need that exists for geldings with showy action, good manners and big enough for carriage or van work, and Hackney breeders use their stallions on the right sort of mares to produce such stock, gelding classes will not be the least attractive feature of the annual show.

It cannot too often be recalled to mind that in the days when coaches were the chief means of travel, Norfolk got its high reputation by breeding horses for such uses, mating the Hackney stallions with the light, active mares that were then in general use for farm work in the country. In John Lawrence's books we have set down the results of trials made at that time, both of what we now know as the Yorkshire Coach Horse and of the Hackney, mated with such mares. The verdict was decidedly in favor of the Hackney stallion, as giving both action and endurance.

The total entry for the London Show of March, 1894, was 225 stallions, 161 mares and twenty-one geldings. As compared with that of 1893, there were ten fewer stallions, but twelve mares in excess. The number of mares was, in fact, nearly four times as many as the average of the first four of the Society's shows. One-third of the stallions were fully matured horses, very highly commended; two classes of three-year-olds and the two-year old class were excellent. The two-year-olds being a great advance on the display in the previous year. Yearling colts made up a large class with plenty of promise for the future.

A meeting of the Hackney Horse Society was held in the Albion Hotel, Toronto, at 4 p m., on July 10th, 1895, Mr. H. N. Crossley, Vice-President, in the chair.

A communication from the Hon. John Dryden was read by the Secretary, asking that two delegates be appointed to attend a meeting to be called by him early in September, to take into consideration the future conduct of the Stud Book, as the Agriculture and Arts Association was to pass out of existence.

It was resolved that R. Beith, M.P., of Bowmanville, and N. Awrey, M.P.P., of Hamilton, be the two delegates.

It was also resolved that R. Beith, M P., and N. Awrey, M.P.P., be delegates *pro tem* to attend a meeting to establish a Canadian Horse Breeders' Association.

AGREEMENT.

TORONTO, October 22, 1895.

We, the undersigned, delegates from the Hackney Horse Society, appointed for that purpose, hereby agree to pay the Registrar of Live Stock the sum of thirty-five cents for each certificate issued, and fifteen cents for each transfer, he to do all the clerical work and proof-reading necessary to complete the volumes.

(Signed) ROBERT BEITH,
NICHOLAS AWREY.

CLYDESDALE HORSE ASSOCIATION.

The ninth annual meeting was held on the 6th of February, 1896, at the Albion hotel, Toronto, at 2 p.m.

President ROBERT DAVIES, of Toronto, took the chair and called the meeting to order.

Among the members present there were: Messrs. R. Beith, M.P., Bowmanville; Dr. McCrae, Guelph; William Smith, M.P., Columbus; R. Shaw Wood, London; W. A. Clemons and G. W. Clemons, St. George; Jos. Watson, Greenbank; James Davidson and John Davidson, Ashburn; John Holderness, Toronto; Heron Bros., Ashburn; D. Sorby and O. Sorby, Guelph; James Allan, Marshhill; James Burns, Greenbank; V. Ficht, Oriel; G. W. Green, Toronto; Robert Miller, Brougham; J. D. Howden, Whitby; John Vipond, Brooklin; A. B Major, Whitevale; Peter Christie, Manchester; Alexander Dogherty, Ellesmere; John Duff, Rockwood; George Clayton, Peepabun; Peter Stewart, Parkhill, Mr. Thompson, of the *Farmer's Advance*; Henry Wade, Secretary, Toronto.

The PRESIDENT: I, along with one or two other directors, had the pleasure of meeting the Hunt Club, of Toronto, who are anxious to join us in holding a show in Toronto. We had a meeting two days ago but nothing so far has been definitely settled but some small preliminary matters. They intend holding another meeting on Friday next for the purpose of making some definite arrangement. If possible we are going to get the new drill shed, and with their influence and what we can do ourselves we expect to gain our object. The date of the show is a serious consideration. At this meeting to-day I would like to get an expression of opinion as to the proper time. The Hunt Club would like it deferred as late as possible, so as to make it the fashion of the people of Toronto, and thus make it a paying concern. They propose doing business similar to what they are doing in New York City, selling boxes and giving prizes. They expect to make thousands of dollars instead of hundreds as we do.

It was moved by Mr. ROBERT MILLER, of Brougham, seconded by Mr. D. SORBY, and carried, that the minutes of the last annual meeting be taken as read.

The Secretary then read the Secretary-Treasurer's report for 1894, and on motion of Mr. DAVIDSON, seconded by Mr. E A. MAJOR, it was adopted.

This report was lost in the fire, but an extract from one of the papers says:

The Treasurer's report showed that negotiations during 1894 had fallen off, there being only 147 recorded, as against 293 the previous year. Volume Eight of the record will be printed, (unfortunately the manuscript for the females was lost in the fire, so that they will be incomplete). At the last annual meeting the standard that was changed for 1894 was again changed to read as formerly, that a Canadian-bred Clydesdale for exhibition purposes shall not have an imported mare in its pedigree.

CORRESPONDENCE.

The correspondence which passed between the Department of Agriculture at Ottawa and the Washington authorities as to the admission of Clydesdales free of duty into the United States, was read.

The President called upon Mr. ROBERT MILLER to inform the meeting of the state of feeling existing at Washington, as he had waited on the Government.

Mr. MILLER: Anything I could say would be merely to enlarge on the correspondence that has been read by the Secretary. I do not know of any grounds we can take in trying to advocate our claims with the American Government except to say on the grounds of reciprocal trade between nations, we think they ought to extend to us the same courtesy we extend to them in their Stud Book and Herd Books. We recognize the American Clydesdale Book, the American Shorthorn Book, the American Shropshire Association's Book, or any other books that are authorized by that Government when they make an application to fetch in animals here. We ask in return from them that they should recognize our books when we make application to enter any animals registered in this country, when we wish to take them into their country. It is not necessary for me to explain the grounds that we took. It must be satisfactory to this audience and to the American Clydesdale Association to know that the plea that we put forth was sufficient to get the Government here to act on our suggestion. They have done everything they could, and I think the correspondence shows that they put a strong plea forward when they asked that our books be recognized by the United States authorities.

Mr. MCCRAE: What did the American associations say as to whether they used their influence.

Mr. MILLER: I have asked the Clydesdale Association and the Shorthorn Association, and they most emphatically deny that they ever made any move at all in the direction of getting the authorities at Washington to discriminate against our books.

Mr. ROBERT BEITH: The Shropshire Association also took part in it, although they say they never did.

Mr. D. MCCRAE: I would like to ask Mr. Miller whether he thinks the Clydesdale Association in the United States would be willing to pass a resolution to ask their Government to treat us in the way we ask.

Mr. MILLER: I do not think they would. They have refused to do so on the grounds they have never moved in the matter hitherto, and do not feel like doing it now.

Secretary WADE: We have heard from very good authority that they have.

Mr. SMITH, M.P.: I was present with the deputation in Ottawa; Mr. Beith was there as well. The Minister of Agriculture was willing to do everything in his power. I think he has made the attempt at least and failed. Whether we can do anything more or not I do not know. Mr. Miller gets very nearly at the bottom of the matter when he says the Clydesdale Association on the other side will not ask to make any change. If they will not I do not think we can do anything.

Mr. MILLER: The reason why the American Clydesdale Association refuse to make that request at Washington is, they say that if our books are recognized there that we certainly will not register as many in the United States as we do at the present time, and in that way they would be injuring their own association and the registration in their own book, and we have no claim on them in the way that we have mentioned because they are not to blame in any manner for this discrimination that has taken place. The members of the Executive and the members of the association I have spoken to say they have never taken any part or move in the matter of that kind.

Mr. D. McCrae: I have heard it stated, I do not know whether it is true or not, that the American Clydesdale Association was largely responsible for this action. The statement may be erroneous, but it certainly has been a common report.

Mr. Miller: I thought so one time myself, and I think yet they were.

President Davies: I think any person who wanted to register a horse over there knows that. It has cost me a great deal of money in registering over there. If we want to sell an animal over there it must be registered before it can go in their book, and as regards my own experience, at one time it cost me $150, and another time $25, and another time it ran down to $5. They will not acknowledge us, for the moment they do they will cut off a large revenue from this country that they are getting to establish their books. In reference to the holding of the Spring Horse Show, is it the wish of the association that we should join the Hunt Club here in making it a grand show? It was arranged they were to receive two thirds of the profits and pay two-thirds of the expenses, we to receive one-third of the profits and pay one third of the expenses, we to have charge altogether of our own department, appointing our own judges and everything of that kind relating to our horse department. They propose looking after their own interests, that is driving horses and everything else in connection with their side, but all of us working together. The date is a very serious matter and some thought it could not remain over as long as they wanted it to, and that is why we stopped. It was to agree on the date. It is for the association to discuss that matter.

Mr. Robert Miller moved, seconded by Mr. McCrae, and resolved, that in the opinion of this meeting it is advisable the spring show be held on the 11th, 12, and 13th of April next.

Mr. McCrae: Mr. President, I would like to discuss these finances. I do not want to find fault, but I think according to the balance, we are getting behind. We had a balance on hand a while ago, but now we have a balance behind. We are putting our money into this affair and we ought to see more of it. We should call the attention of the Directors to this. We have paid high fees in the past and are still. It was the distinct understanding we should not pay a yearly subscription fee of $3, unless we got a stud book yearly. We are paying to-day because we are behind. I think that the Agricultuture and Arts Associa.ion should do something better for us than they are doing. We have to pay our subscription fee, and pay for the book as well, when we get it. An entry fee of fifty cents will print and publish that book.

Secretary Wade: No, it cannot be done for less than we are getting it, a dollar. A dollar only pays for printing and compilation without the price of the herd book afterwards. We are doing it a little more extensively than the Swine Breeders. They of course register six where we only register one.

Mr. D. McCrae: A gentleman in the printing business tells me he will print a book for fifty cents per entry. We have been paying $2 for many years, and now $1 and pay, for the book when they are printed also. Mr. Wade says it takes $1 and in the past we have been paying $2 for what could have been done for one.

Secretary Wade: But you do not take into consideration there are four or five hundred books on the shelves that will be there for many years.

Mr. McCrae: This is a matter that the Directors should look very carefully into and see if the Association cannot be put on a better financial standing.

Mr. R. Shaw Wood, of London: I propose we should have a copyrighted classification of all imported Clydes as a sort of peerage, and each horse of that peerage be graded according to the number of points. A council of probably five judges, to decide all cases, to form a court of appeal in cases of disputed judgment. I do not bring it forward as a motion because it should be considered first. It would give a value and a standard to our horses that would be of great value to the outside public.

Mr. Robert Miller: That would be a matter for the Executive Committee to consider.

ELECTION OF OFFICERS.

The following officers were then elected :

President : ROBT. DAVIES, Toronto.

Vice-President for Ontario : ARTHUR JOHNSTON, Greenwood.
" *Quebec* : ROBERT NESS, Howick, Que.
" *Nova Scotia* : Col. CLARK BLAIN.
" *New Brunswick* : A S. MURRAY, Fredericton, N.B.
" *Prince Edward Island* : JAMES CLOW, Murray Harbor, P.E.I.
" *Manitoba* : J. E. SMITH, Brandon, Man.
" *North-West Territories* { JOHN A. TURNER, Calgary, N.W.T. / J. M. MCFARLANE, Saskatchewan.

Directors : D. Sorby, Guelph ; John Davidson, Ashburn ; George Cockburn, Baltimore.

; Thomas McMillan, Constance ; R. Graham, Claremont ; J. Vipond, Brooklin ; R. Miller, Brougham.

Delegate to Farmers' Institute : D. McCrae, Guelph.

Delegates to Toronto Industrial Exhibition : Wm. Smith and John Davidson.

Western Fair, London : E. W. Charlton.

Auditor : D. McCrae, Guelph.

Mr. ROBERT MILLER : I wish to draw the attention of this meeting to a move that is being made by the Clydesdale Association in the United States. It has been customary for a good many years to hold a fat stock show in Chicago, in the month of November, and in connection with the show there has been, for a number of years, a horse show also. There has never been any prize for geldings of the heavy draught breeds. The American Clydesdale Association has now resolved that they will at the next show there, for the best pair of geldings, and for the best single gelding shown in halter and harness, give something between $700 and $800. The first prize for the best pair of heavy draught geldings of pure breed, or mares that are not pure-bred, but originally from record, will be $200. The second prize will be $150, the third $100, the fourth $75, and the fifth $50. There will be a small charge for entry, but it will not be over five per cent. ; and in the report that will shortly be distributed amongst the Clydesdale breeders in the United States and Canada, there is a particular request made to the Canadians to make as good a show as they can, and in that report there is a compliment paid in this way, that if Canadians make as good a show as they usually do, it will be a credit to the Clydesdale breed of horses in this country and it will show the breeders in the west that draught geldings excel all others, that the values of Clydesdale geldings will be increased to a very great extent. I want to impress upon everyone here the advisability of making as good a show of geldings as possible. We have been going through a period of great hardship, we have not been making any money out of horses, but I think, on the other hand we also feel confident that the time must be near at hand when there will be a great shortage of draught geldings, and the demand must increase to a very great extent. There is going to be a shortage, and draught horses must be had at any cost, and so we should take advantage of this chance of placing ourselves in the position we can. We are the greatest producers in America, at any rate, of first-class geldings, and we will have a far greater demand for them in the country than we have ever had. The breeds of Percherons, Normans and Shire horses that have had, to a very great extent, a monopoly in the United States lately, are a little too small. Their associations are not in as good condition as the Clydesdale Association is, and now is the time for us to place ourselves in the front rank when it will be much easier than it will be when they all commence to pay a reasonable amount of money for any exertion, and when there gets to be a greater competition than there is at present. So I, as a representative of the American Clydesdale Associa-

tion, would like to ask everyone here, that can do so, to prepare a pair of geldings or a single gelding to make an exhibit there that will be a credit to Canada, and I can make this statement to you, that if there is any gentleman present who knows where there is a pair of geldings weighing heavy enough and good enough conformation to make a good winning there, I can get him a good customer for them.

At 4 p.m. the meeting adjourned.

A meeting of directors Clydesdale Horse Association was held in the Albion Hotel, Toronto, on July 10th, 1895, at 11 a.m. The President, R. DAVIES, occupied the chair.

A communication from the Hon. JOHN DRYDEN was read by the Secretary, asking that two delegates be appointed to attend a meeting to be called by him early in September, to take into consideration the future conduct of the Stud Book, as the Agriculture and Arts Association was to pass out of existence.

It was resolved that the President and Mr. DAVID MCCRAE be the two delegates.

It was resolved that R. DAVIES and D. MCCRAE be delegates *pro tem* to attend a meeting to establish a Canadian Horse Breeders' Association.

AGREEMENT.

TORONTO, October 22, 1895.

We the undersigned delegates from the Clydesdale Horse Association, appointed for this purpose, hereby agree to pay the Registrar of Live Stock the sum of thirty-five cents for each certificate issued, and fifteen cents for each transfer, he to do all the clerical work and proof-reading necessary to complete the volumes.

ROBERT DAVIES.

CANADIAN HORSE BREEDERS' ASSOCIATION.

PREPARATORY MEETING.

A preparatory meeting of the Canadian Horse Breeders' Association was held in the Albion Hotel, Tuesday, September 10th, 1895, at 8 p.m.

Present: Robert Davies (in the chair), Toronto; Dr. Andrew Smith, Toronto; George Pepper, Toronto; John Holderness, Toronto; N. Awrey, M.P.P., Hamilton; James Cochrane, Hillhurst, Quebec; G. W. Bowker, Woodstock; A. Wilson, Paris Station; D. Sorby, Guelph; James Davidson, Ashburn; Alex. Galbraith, Janesville, Wis., U.S.; R. Beith, M.P., Bowmanville; R. Graham, Claremont; Neil Smith, Brampton; H. N. Crossley, Rosseau; R. Miller, Brougham; G. H. Hastings, Deer Park, and Henry Wade, Secretary, Toronto.

Mr. WADE, Secretary, explained the objects of the meeting, saying they were there for the purpose of forming what we might term a Canadian Horse Breeders' Association, for the purpose of running shows and encouraging the improvement of the better class of stock, as the Agriculture and Arts Association had now passed out of existence. He also proposed that two members from each Horse Association now in existence be chosen to compose a directorate for said Association and that $1 be the annual fee.

Mr. AWREY: The real object of this meeting is whether we want to have a spring show or not. There is not the least doubt that there is an effort being made to form a joint stock company in this city. Now the question for us to consider here is do we want a spring show for the encouraging and improvement of a better class of stock, and if we do, do we want it under the control of a Horse Breeders' Association of this Province. That being the case it would be necessary to incorporate it under the Agriculture and Arts Act for 1895. If not, some other method should be suggested.

A lengthy discussion took place as to the arranging of this Association, when finally the following resolution was passed :

Moved by Dr. SMITH, seconded by ROBERT BEITH, M.P., "That an organization under the provision of the Agriculture and Arts Act of 1895 be formed, designated the Canadian Horse Breeders' Association ; that the said Association be organized by two representatives being appointed from each Horse Breeders' Association now in existence, the objects of said Association being to hold annual exhibitions for which prizes will be offered for the encouragement of the importation and breeding of pure-bred stock in all the recognized breeds of horses ; and that the said Provisional Directors meet as soon as possible and adopt by-laws for the purpose of completing the formation of this Association, and then a general meeting be called for the election of the necessary officers and the securing of the necessary fifty members to obtain incorporation." Carried.

Moved by Mr. AWREY, seconded by Mr. BEITH, that we form an Association on the terms of the resolution. Carried.

PROVISIONAL DIRECTORS :

Clydesdale Association : Robert Davies, David McCrae.

Hackney Association : Robert Beith, M.P. ; N. Awrey, M.P.P.

Shire Horse Association : James Gardhouse, H. N. Crossley.

Standard Bred Trotters' Association : The President and Secretary.

Thoroughbred Horse Association : Dr. Smith and George Duggan.

The meeting then adjourned.

CANADIAN HORSE BREEDERS' ASSOCIATION.

The first regular meeting of the Canadian Horse Breeders' Association was held in Albion Hotel, Toronto, on November 21st, 1895.

Members present : Robert Davies, Toronto ; David McCrae, Guelph ; R. Beith, M P., Bowmanville ; N. Awrey, M P.P., Hamilton ; John Gardhouse, Highfield ; H. N. Crossley, Rosseau ; Dr. A. Smith, Toronto ; Joseph Duggan, Toronto ; J. H. Allen, Picton ; Leeming Carr, Stony Creek ; J. C. Boyd, Sault Ste. Marie ; A. G. Ramsay, Hamilton ; Wm. Wilkie, Toronto ; Wm. Hendrie, Jr., Hamilton ; Hugh Smith, Claude ; C. P. Geary, St. Thomas ; H. Wade, Toronto ; R. Graham, Claremont ; H. Cargill, M.P., Cargill ; F. Chisholm, Milton ; W. A. Lawrence, Milton ; James Cochrane, Hillhurst, Que.; William Beith, Bowmanville ; J. D. Graham, Toronto ; A. G. Bowker, Woodstock ; John Vipond, Brooklin ; John Holderness, Toronto.

The President, R. DAVIES, asked the Provisional Secretary, H. WADE, to read the minutes of the preparatory meeting, which were read and confirmed.

The President then said they had drafted a Constitution and By-laws, which would be read by Mr. WADE, and they would like to have them confirmed here if no amendments were to be made.

Moved by D. MCCRAE, seconded by R. BEITH, M.P., that the Constitution and By-laws as read by the Secretary be adopted. Carried.

ELECTION OF OFFICERS :

From Clydesdale Horse Association : R. Davies and David McCrae.

From Hackney Horse Society : R. Beith, M.P. and N. Awrey, M.P.P.

From Shire Horse Association : John Gardhouse and H. N. Crossley.

From Thoroughbred Horse Association : Dr. A. Smith and William Hendrie, Jr.

From Ontario Trotting and Pacing Horse Breeders' Association : H. Cargill and Dr. L Carr.

Moved by DAVID MCCRAE, seconded by Mr. BOWKER, that the Directors take immediate steps to incorporate this Association under the Agriculture and Arts Act for 1895. Carried.

Mr. DAVID MCCRAE thought there was a matter this Association should take up, and that was the matter of the classification of the different breeds of horses at the shows, and that prizes should be given to herds, the get of one animal.

Mr. WM. WILKIE thought Mr. McCrae's suggestion a good one, and said that all knew we could judge a stallion very well; it was only indeed by showing the stock that we know what a stallion was. After a little discussion the following resolution was passed:

Moved by WM. WILKIE, seconded by H. N. CROSSLEY, that the directors of the Toronto Industrial Exhibition be asked to give prizes to a herd of four for the different breeds of horses, ages of the gets not to exceed two years. Carried.

Mr. DAVIES said one point they had overlooked was the appointing of representatives from this Association to the Industrial Board.

Moved by Dr. SMITH, seconded by DAVID MCCRAE, that R. BEITH, M.P. and H. CARGILL, M.P., be delegates from this Association to the Industrial Board.

Mr. BEITH recommended that the directors take into consideration the advisability of showing young stock at the show.

DIRECTORS' MEETING.

The regular meeting adjourned and the Directors proceeded with business.

Moved by DAVID MCCRAE, seconded by R. BEITH, that ROBERT DAVIES, be President of this Association. Carried.

Moved by R. BEITH, seconded by DAVID MCCREA, that Dr. SMITH be Vice-President of this Association. Carried.

Moved by Mr. MCCRAE, seconded by R. BEITH, that Mr. HENRY WADE be Secretary-Treasurer of this Association. Carried.

It was moved and seconded that the Executive Committee be: The President, Vice-President, H. N. Crossley, D. McCrae, H. Cargill and Mr. R. Beith. Carried.

CONSTITUTION

ARTICLE 1.—NAME.

This organization shall be known as "The Canadian Horse Breeders' Association."

ARTICLE 2.—OBJECT.

The object of said Association being to encourage the importation and breeding of pure-bred stock in all the recognized breeds of horses in every legitimate way, and of maintaining the reputation that Canada has gained of being the most healthy breeding ground for stock that there is on this continent.

ARTICLE 3.—OFFICERS.

1st. The officers of this Association shall be a President, a Vice-President, and a Secretary-Treasurer, whose term of office, with the exception of the Secretary-Treasurer, shall be for one year, or until their successors are elected. Duties of officers the same as in other Associations.

2nd. The Association shall be governed by a Board of Directors consisting of ten members, to be elected annually, by ballot, from members of this Association, and representing, as far as practicable, the different Horse Breeders' Associations now in existence, which are as follows:

The Hackney Horse Society; The Clydesdale Horse Association; The Shire Horse Association; The Thoroughbred Horse Association, and Trotting Horse Breeders' Association. Four of these gentlemen shall form a quorum.

This Board of Directors shall, from among themselves, elect the officers of this Association annually by ballot and such smaller committees as they think proper. Vacancies occurring during the interim may be filled by the Directors.

ARTICLE 4.—MEMBERSHIP.

The membership of this Association shall consist of the present provisional officers, and any person who takes an interest in horses may and shall become a member on signifying to the Secretary his desire to do so, and by paying $1, providing his name be approved by the Board of Directors.

ARTICLE 5.—MEETING.

1st. The annual meeting shall be held at such time and place as may be designated by the Directors. Fifteen days' previous notice to be mailed to each member of the Association, giving time and place of meeting.

2nd. The sub-committee shall hold meetings at the call of the President and Secretary, when requested in writing by any three Directors.

ARTICLE 6.—SECRETARY-TREASURER.

1st. The Secretary shall hold office during the pleasure of the Directors, and shall keep on file all documents the property of the Association, shall report all meetings in a minute book, and shall hold them subject to the inspection of any member of the Association at all reasonable times.

2nd. The Treasurer shall receive all monies due the Association and deposit the same in one of the chartered banks.

3rd. All bills against the Association shall be presented in detail, approved, passed by the proper committee and paid by the Secretary-Treasurer, countersigned by the President.

ARTICLE 7.—AMENDMENTS.

This Constitution may be amended or changed, or any other business transacted at any called or annual meeting, with the approval of two-thirds of the members at such meeting, fifteen days' notice being given to members of the Association.

ARTICLE 8.

When new Horse Associations are formed for pure breeds of horses they may be admitted if approved by the Directors, and the Constitution amended to allow of their representatives on the Board.

BY-LAWS.

1st. Persons desirous of becoming members shall so notify the Secretary, pay one dollar entrance fee, and agree, if elected, to conform to the rules of the Association and not to withdraw without giving three months' notice of intention to do so.

2nd. Members shall pay an annual fee of one dollar, which annual subscription shall be due and payable on or before the first day of January of each year, and all reports of the Association will be mailed free to each member.

3rd. Members must keep the Secretary advised of their post-office addresses, and all communications shall be considered delivered which have been mailed properly addressed and the postage paid.

4th. Fifteen days before any general meeting, notice thereof and of the business to be transacted, shall be mailed to every member.

SHIRE HORSE ASSOCIATION.

The sixth annual meeting of the Shire Horse Association was held in the Albion Hotel on the 6th of February, 1895. As the manuscript of the report for this meeting was destroyed at the fire when the Agricultural Hall was burnt, a correct account of the proceedings cannot be given. The list of officers elected is as appears below :

President : JOHN GARDHOUSE, Highfield.

Vice-President for Ontario : H. N. CROSSLEY, Rosseau.

" Quebec : J. V. PAPINEAU, Barnston.

" Manitoba : HENRY MUNN, Brandon.

" P. E. Island : THOS. ROBBINS, Centreville.

Directors : Jas. H. Smith, Highfield ; Geo. Garbutt, Thistleton ; J. G. Wardlow, Downsview ; Robt. Mackness, Tullamore ; John Donkin, Riverview ; Val. Ficht, Oriel ; Wm. Mullin, Hillsburg.

Secretary : H. Wade, Toronto.

Delegate to Industrial Exhibition : H. N. Crossley, Rosseau.

Treasurer's Statement.

Receipts.

December 31st, 1894, to cash on hand	$47 00

Expenditures.

March 12th, 1894, by cash, spring show	$20 00
December 31st, 1894, balance	27 00
Total	$47 00

A meeting of the Shire Horse Association was held at the Albion Hotel, Toronto, on July 10th, 1895, the President, John Gardhouse, in the chair.

A communication from the Hon. John Dryden was read by the Secretary, asking that two delegates be appointed to attend a meeting to be called by him early in September, to take into consideration the future conduct of the Stud Book, as the Agriculture and Arts Association was to pass out of existence.

It was resolved that the President and H. N. Crossley be the two delegates.

It was also resolved that John Gardhouse and H. N. Crossley be delegates, *pro tem,* to attend a meeting to establish a Canadian Horse Breeders' Association.

Agreement.

Toronto, Oct. 22, 1895.

We, the undersigned delegates from the Shire Horse Association, appointed for that purpose, hereby agree to pay to the Registrar of Live Stock, the sum of 35 cents per pedigree and 15 cents for each transfer, he to do all the clerical work and proof-reading necessary to complete the volumes.

Signed. { Horace N. Crossley, John Gardhouse.

DOMINION SHORTHORN BREEDERS' ASSOCIATION.

The ninth annual meeting of the Dominion Shorthorn Breeders' Association was held at the Auditorium, Toronto, at eleven o'clock a.m. 8th of February, 1895.

The President, R. Gibson, took the chair and called the meeting to order.

Among the members present there were : Messrs. Arthur Johnston, Vice-President, Greenwood ; W. W. Ballantyne, Stratford ; John I. Hobson, Mosboro'; Robt. Miller, Brougham ; Jas. Russell, Richmond Hill ; C. M. Simmons, Ivan ; F. J. Patten, St. George ; D. D. Wilson, Seaforth ; J. Hunter, Alma ; T. E. Robson, Ilderton ; F. Birdsall, Birdsall ; Val. Ficht, Oriel ; J. Miller, Markham ; Edward Jeffs, Bond Head ; W. W. Ballantyne, Stratford ; W. J. Biggins, Clinton ; H. Wright, Guelph ; Wm. Linton, Aurora ; W. G. Pettit, Burlington ; H. Smith, Hay ; A. J. C. Shaw, Themesville ; Jas. Gardhouse, Highfield ; Henry Wade, Secretary, Toronto, and others.

It was moved, seconded and adopted that the minutes of the last annual meeting be taken as read.

The Secretary then read the annual report as follows :

NINTH ANNUAL REPORT OF THE EXECUTIVE COMMITTEE.

TORONTO, February 8th, 1895.

The Executive Committee beg to present the ninth annual report of the affairs of this Association by the Secretary for the year ending 31st December, 1894.

Registrations.

In 1894 we were paid for 3,047 registrations, 3,144 certificates, and 493 changes of ownership. From these we have only rejected two registrations and two certificates, returning the fees, leaving 3,045 registrations, 3,142 certificates, and 493 transfers, against in 1893, 3,484 registrations, 3,540 certificates, and 587 transfers, and against in 1892, 3,641 registrations, 3,454 certificates, and 441 transfers.

Registration Fees.

Following up the change in registrations as a matter of course there is a corresponding change in registration fees. In 1890 we received $3,043.75 ; in 1891, $3,152.50 ; in 1892, $3,835.25 ; in 1893, $3,787.45 ; and in 1894, $3,357.75, or $429.70 less than in 1893, owing to the general depression in business.

Herd Books.

Vol. I.—There were sent out in 1887, 550 volumes ; in 1888, 51 volumes ; in 1889, 33 volumes ; in 1890, 19 volumes ; in 1891, 21 volumes ; in 1892, 27 volumes ; in 1893, 18 volumes ; and in 1894, 20 volumes, to members and others, leaving on hand 261 volumes.

Vol. II.—There were sent out in 1888, 451 volumes ; in 1889, 39 volumes ; in 1890, 26 volumes ; in 1891, 16 volumes ; in 1892, 20 volumes ; in 1893, 14 volumes ; and in 1894, 16 volumes, to members and others, leaving on hand 418 volumes.

Vol. III.—There were sent out in 1888, 226 volumes ; in 1889, 189 volumes ; in 1890, 46 volumes ; in 1891, 16 volumes ; in 1892, 19 volumes ; in 1893, 10 volumes ; and in 1894, 17 volumes, to members and others, leaving on hand, 474 volumes.

Vol. IV.—There were sent out in 1889, 302 volumes ; in 1890, 105 volumes ; in 1891, 29 volumes ; in 1892, 21 volumes ; in 1893, 5 volumes ; and in 1894, 13 volumes, to members and others, leaving on hand, 522 volumes.

Vol. V.—There were sent to members in 1890, 134 volumes ; in 1891, 130 volumes ; in 1892, 78 volumes ; in 1893, 39 volumes ; and in 1894, 33 volumes, leaving on hand 606 volumes.

Vol. VI.—There were sent out to members in 1891, 345 volumes ; in 1892, 29 volumes ; in 1893, 32 volumes ; and in 1894, 29 volumes, leaving on hand 565 volumes.

Vol. VII.—There were sent out to members in 1892, 318 volumes ; in 1893, 28 volumes ; and in 1894, 33 volumes, leaving on hand, 621 volumes.

Vol. VIII.—There were sent out to members in 1893, 304 volumes, and in 1894, 38 volumes, leaving on hand 658 volumes.

Vol. IX.—There were sent out to members in 1894, 269 volumes, leaving on hand 731 volumes.

Vol. X. is completed, and will contain all the pedigrees recorded up to 1894, and as in Volume VII., each pedigree can be traced in its entirety by referring to the pedigree of another animal in the same volume, making the volume complete in itself. In this volume the cows are printed under the name of each owner. This plan debars us from numbering the females at the time of recording. It will be sent out immediately.

Vol. XI., containing all the pedigrees recorded in 1894, has been closed, and will be printed at once.

Pedigrees on Record.

Volume I. contains	3,304	Volume VIII. contains	4,024
" II. "	4,427	" IX. "	3,633
" III. "	4,593	" X. "	3,669
" IV. "	4,957	" XI. will contain	3,213
" V. "	4,388		
" VI. "	5,904	Total	47,066
" VII. "	4,954		

As shown by the above table, we are now recording for the twelfth volume, which will contain animals recorded in 1895.

Number of Members from inception to date.

—	New.	Resigned and lapsed.	Not paid.	Paid.	Total paid.
B. A., 1882	164	.....	.....	164	164
" 1883	73	.....	.....	164	237
" 1884	42	.....	.....	173	215
" 1885	39	.....	.....	187	220
Dom. S. H. B. Asso., 1886	215	37	8	195	410
" 1887	80	54	81	357	437
" 1888	46	79	69	388	434
" 1889	36	37	91	398	434
" 1890	29	33	74	405	434
" 1891	32	67	59	365	397
" 1892	60	22	47	398	458
" 1893	49	38	72	349	398
" 1894	66	72	88	318	384

This table shows that our paid-up membership roll has decreased fourteen in the last year in total numbers. There are still a large number (eighty-eight) who are in arrears for 1894. Our income from members' fees for 1894 was $1,536, or $64 less than in 1893, owing to the financial depression.

Office work.

This continues to be about the same, fully 2,803 letters and cards having been sent out, besides several thousand entry forms. A list of errors is made in each volume, which should be marked in red ink in the volume mentioned. We also hope breeders will furnish us with any catalogues of sales that may be made during the year.

Your committee would call particular attention to the rule requiring all calves born after the 1st of January, 1889, to be recorded before they are eighteen months ago. A double fee will be charged after that date. Attention is also called to the clause in the constitution which requires that "a member must pay up all his fees in arrears before he can resign."

Your committee are sorry that the result of the negotiations with the Treasury Department of the United States, brought about by your delegation waiting on the Minister of Agriculture for the Dominion, has not been satisfactory, and the objectionable ruling is still in force whereby none of our Herd and Stud Books are recognized at the frontier in passing stock free of duty.

Your committee, since the last annual meeting, have placed $3,000 insurance on unbound books at Hunter & Rose's Publishing House, and $2,500 on bound volumes stored in Agricultural Hall.

Your committee also note that the editor of the Herd Book has completed in volume X. his very valuable history of Shorthorn importations up to date.

Since the last meeting we have received the XXXVIII. volume of the American Herd Book and the XL. volume of Coate's Herd Book as exchanges.

Extracts from By-laws.

Section 1.—Persons desirous of becoming members shall so notify the Secretary, pay the entrance fee, and agree, if elected, to conform to the rules of the Association, and not to withdraw without paying all fees due, and giving three months' notice of their intention of doing so.

Section 2.—Members shall pay an entrance fee of $4, and subsequently an annual subscription of $4, which annual subscription shall be due and payable on the first of January of each year.

New By-law.—That all calves dropped after January 1st, 1889, shall in future be registered within eighteen months of birth, and if not so registered, double fees shall be charged for their registration.

Section 15—Fees.—Charges for registration will be: To members, registration and certificate, seventy-five cents for each animal; to non-members, registration and certificate, $1.25 for each animal; over age, double fees. In all cases a certificate goes with registration. Change of ownership, twenty-five cents; duplicate certificate, twenty-five cents. Back volumes of Herd Books, $2.50 each.

FINANCIAL STATEMENT.

Receipts.

1894.		
Jan. 1.	Cash on hand	$1,741 93
Dec. 31.	318 yearly subscribers	1,272 00
	66 new subscribers	264 00
	Registration fees	3,357 75
	Interest	48 85
	Herd books	68 00
		$6,753 53

Expenditure.

1894.		
Dec. 31.	By clock presentation	$50 00
	Copyright and set American Herd books	37 15
	Registration fees returned	26 25
	Printing and stationery	167 05
	Postage	319 10
	Auditor and stenographer	65 00
	Committee expenses	136 45
	Sundries, special prize	225 00
	Herd Book, Vol. IX.	1,167 60
	Herd Book, Vol. II., binding 100 copies	57 50
	Salaries—	
	R. L. Denison	700 00
	H. J. L. Laws	600 00
	H. G. Wade	520 00
	H. Wade	500 00
	Insurance	53 24
	Cash	2,129 19
		$6,753 53

Assets and Liabilities.

1894.			1894.	
Dec. 31. To cash		$2,129 19	Dec. 31. By balance	$9,613 19
Office furniture, books, etc		200 00		
Vol. I. D.H.B., 261 copies		391 50		
" II. " 418 "		627 00		
" III. " 474 "		711 00		
" IV. " 522 "		783 00		
" V. " 606 "		909 00		
" VI. " 565 "		847 50		
" VII. " 621 "		931 50		
" VIII. " 658 "		987 00		
" IX. " 731 "		1,096 50		
		$9,613 19		$9,613 19

I hereby certify that I have examined the books and accounts of the Dominion Shorthorn Breeders' Association for the year ending 31st December, 1894, and that the above statement is in accordance with the same.

CHAS. F. COMPLIN,
Auditor.

Toronto, January 17th, 1895.

It was moved, seconded and carried that the report be adopted.

Mr. JEFFS: I see the history of the importation of Shorthorns is completed in volume X., and I have much pleasure in moving the thanks of this Association be tendered to Mr. Wade, the editor, for his arduous labors in that connection. Seconded by Mr. Hobson and carried unanimously.

President GIBSON: I am sure Mr. Wade deserves very great praise for the way in which he has carried out the work which is a matter of history for time to come. He must have spent a great deal of time and labor in completing it. I have much pleasure, Mr. Wade, in tendering you this vote of thanks.

Secretary WADE: It has been a labor of love in a sense, although it has taken up a great deal of time. I am much obliged to you, gentlemen, for your kind vote of thanks.

It was moved by JOHN I. HOBSON, seconded by Mr. JAS. HUNTER and carried, that the Shorthorn Association in session assembled takes this their earliest opportunity since the death of the late Frederick William Stone to place on record their appreciation of the very valuable services rendered by him in furthering the Shorthorn and other stock interests of this country, and their high opinion of him as a worthy and honorable gentleman. Further, that we extend to his sorrowing relatives our heartfelt sympathy in this their time of trouble, and that a copy of this resolution be forwarded to the members of his family.

The meeting then adjourned to one o'clock p.m.

Business was resumed in the afternoon, President GIBSON in the chair.

The PRESIDENT: No doubt had the weather been favorable we would have had a large gathering. I postponed any remarks I might make until the report of the directors has been submitted to you, and I now take the opportunity of moving the adoption of the report. The Shorthorn interests are in a rather peculiar condition at the present time. Owing to the depreciation in values all round, we are not getting what we really ought to, and I wish to say a few words of encouragement. As long as there is farming carried on in Canada we must have cattle, and just as long as we have cattle there is no bread can take the place of the Shorthorn cow as the general cow of this continent.

The President then read the following address, which was received with applause :

ENCOURAGEMENT TO SHORTHORN BREEDERS.

It is with feelings of pleasure that I again welcome you to our annual meeting. It is a source of gratification that our finances are in as healthy condition as they are, considering the general depreciation of values, and while announcing the continued prosperity of our Association it is owing to the fact that our breeders still cling to the old ship While all other cattle organizations with which I am acquainted show a great falling off in membership and registrations, ours fails but little comparatively in those respects, an indication, I take it, that there is a practical utility about the breed that none of the others of the beef breeds possess. We all know that when the high tide of prosperity flows over our land, none command the admiration or are so worthy of being made idols of, and when the low water mark is reached, and all the glamor and fashion is removed, there is a something left of real every day value that will ever keep them to the front.

I have sometimes pondered whether these dark days are not of value to teach us the true worth of our favorites. When all the gloss and glare, the artificial environments with which the breed is periodically afflicted—I say when these are removed does not their real worth for practical everyday farm stock appear most conclusively ? One thing has been practically demonstrated, that just as long as cattle are bred in Canada Shorthorns will be the favorites. But here let me sound a word of caution. Because you are not realizing as big prices as formerly, do not think you can save in the manger. Uncle Billy Smith used to say the corn crib cross was the best outcross he ever used. Recollect that no breed pays better for feed and careful raising, and none so badly for neglect. Again, be particularly careful in selecting bulls from strong constitutioned families. Inbreeding up to a certain point has worked wonders, but where it has been injudiciously carried out it has wrought much mischief.

Don't pin your faith upon any one family or strain to the exclusion of others. Recollect that they all spring from the same source, and the judicious blending of the various families will produce the best results as a whole. Remember that "a good Shorthorn is a good Shorthorn, no matter how come."

Because you are not well laid in with the strain that is now fashionable do not feel discouraged. In the next deal you may hold the trumps. We all know what a fickle jade dame fashion is, and how quickly she changes. Remember that those former idols, Bates and Booth, Mason, Knightley and Stephenson, all had their day, each by turn have been fallen down to and worshipped, and while to some they have proved a veritable golden calf, to the majority only a damage and a loss.

Breed for the animal and not so much for the pedigree. Strive to make them good in the show-yard and not on paper. Never was there a time when one could exercise his best judgment and show his skill as a breeder as at the present. Now no man's hand need be tied by fashion, and it is the healthiest sign for the good of the breed and its future usefulness that I have seen for some time.

Another suggestion. Notice how the dairy interest is developing throughout Ontario and Quebec. The Shorthorn breeder ought to have a slice of that trade, for without doubt the dairy habit may be cultivated to such an extent that Shorthorns need fear no rivals in that line. If you doubt my assertion go with me to the London lairages, and I will show you a dozen, aye, twenty Shorthorns to one of any other breed. Mind you, there is no fancy here ; they are not kept for the romance of the thing, or that the battles of Bates and Booth may be fought over again, but on a strict pounds, shillings and pence basis, and this is the experience of as shrewd and business like a lot of men as are interested in any industry. In this direction seems to me to lie a field open for great possibilities.

With these few remarks it now becomes my duty to place in your hands the gift which for four years you have unanimously tendered me. For your confidence I thank you, and I can truthfully say that whatever I have attempted has been with the single

view of what would benefit the breed at large, my own personal interests have been entirely subordinated to the general good. As your President I have identified myself with no clique or particular strain, and I have no doubt that your future Presidents will always sink their individuality for the welfare of the whole. It would be unseemly for me not to note the changes that have been carried out since I have been your President; they have been important. Everything now is working smoothly, and is in good order, and with your efficient Executive Committee everything is being done to cut down unnecessary expense and steer the old ship through the troubled waters. I have but one regret and that is that we have not been able to reduce expenses sufficiently to cover cost of publication out of fees. I take the ground that registration fees should cover the cost of registration, that we have no right to go outside of that fund for that purpose. Were that the case we would then have the membership fees to devote to the interest of the breed, in giving prizes or for whatever purpose you might decide upon.

To the Directors I wish to return thanks for the kind assistance at all times rendered, and to the Secretary for his always genial help, and the cordiality with which he has carried out the necessary changes, and to the members, one and all, I wish to express my thanks for their good will, and I take this opportunity of wishing them a very prosperous year. May 1895 be the milestone on our life's journey which marks the era of a return to better and more prosperous times.

Correspondence.

The Secretary read a communication from the Department of Agriculture at Ottawa and with the authorities at Washington in reference to the recognition of pedigrees of Shorthorns by the United States associations.

Mr. Robert Miller: This is as important a matter as will come before this meeting. I would like to hear Mr. Hobson, Mr. Johnston and any other gentleman that has been considering this matter, as to their opinion whether anything further can be done or not. There is an invitation in that letter from the British Plenipotentiary in Washington to any gentlemen in this country who are interested to place with them any arguments that can be used or any inducements in any form that can be held out to get the authorities at Washington to take a different view of the matter.

The Secretary: It does not appear to me in reading this paper that the reports have been brought before the Minister or Secretary, it was only an acting Secretary. We all know by hearsay that the objectionable rule was made by a former Minister of Agriculture, the Hon. Mr. Rust. There is another Minister of Agriculture in power over there now.

Mr. Miller: The Secretary of the Treasury is the one that looks after it.

The President: I think you will find that it is not the authorities at Washington so much as the different organizations of stock breeders in the United States. It is true we can get our cows recorded in the United States, but if a man comes to your place and buys a bull he wants to take him home with him, and know that he is well taken care of on the way, and if he pays a good price he knows that no man looks after the bull better than the man that pays the money. He cannot wait at your house until you send to Springfield and get the papers made out. I do not think the Government objects so much as the live stock organizations. But the United States should look a little further than settling this point as regards Canada. That rule that they have put on paper will cut both ways. They have sent Mr. Buchanan to South America—he was Commissioner of Agriculture at the World's Fair. He tried to work up a trade with South America, that England now monopolizes, to show them the United States is much closer than Liverpool, and they can get the stock as well here as there. If the people in South America were to say, "We will not accept your pedigrees because Shorthorns do not belong to the country, we must have the animal recorded in the English Herd Book,"—if they were to look at it in that light and see what would be the effect it might cause

them to modify the rule as far as Canada is concerned. That is the only thing that you can bring to bear upon them with any pressure to change any ruling, that it would prevent people in South America from buying.

Mr. LINTON: If you have your animals recorded over there they will stop you at the line and make you pay the duty, although they may refund it eventually, but they will make you pay. The last I sent over they made the party at the lines pay the duty, and he had a certificate from the American Register, too.

Mr. JOHNSTON: There is not the slightest hope for any relief in this matter through official resources. They have, without doubt, an intimation from the live stock associations there that these associations do not want facilities for taking in cattle there in opposition to themselves. But the times over there, and in the cattle trade, are very much worse than here, and we know to a certainty many men are as sorry about these regulations as we are. They will need to have an intimation from the people who vote before they will change to suit us. I have a perfect knowledge at the present time, notwithstanding the hard times there, that there are men who seriously wish these regulations removed in the United States, and they will be because they know we have very much the better cattle and they cannot get on without them.

Mr. RUSSELL Richmond Hill: This is a matter of importance. At the same time if I can sell cattle to the Americans I find very little trouble in getting them away. They need our cattle, and they have to come for them some day, but the great question for us is in regard to the quarantine. I have got cattle recorded in three days time, and I find nothing but disappointment from the American Register. I have registered thirty-five to get ten sold. I think the proper place to start is to get that quarantine removed.

Mr. MILLER: There is one thing certain, that as we stand now there will be no use for us to ask them to remove the embargo against our cattle when we do not propose to remove the embargo against their cattle. I propose the incoming President, the retiring President and the Secretary be a committee to arrange a communication with the authorities in Ottawa in the furtherance of the undertaking on which we went to Ottawa last winter. I might suggest, as I did at the Clydesdale Association meeting, that I believe there is only one argument we can produce that might have any weight with the authorities at Washington with regard to the removal of their restrictions against the registration in our books, and that is, they have a Shorthorn Association there, and they issue a book, also a Clydesdale Association which publishes a book. They have associations of all the different breeds of live stock almost and they all publish books. Not one of these breeds that come to my memory at the present time was originated in the United States except the trotting horse. Would it be anything more than a friendly act on their part to give our books in this country that are up to an equal standard with their books the same recognition? I say it is nothing but international courtesy on their part to render us the same treatment we have been giving them in spite of their ill-usage all the time.

The SECRETARY: In addition, these animals that go to the United States, even if they are recorded in Canada, will be in future recorded in the American books; they are not going to lose anything. Even if they are not recorded that year, as soon as they begin to raise animals they have all to go into the American book.

Mr. JOHNSTON, Greenwood: I would suggest before this motion is passed it would be well to call attention to another matter in connection with it. When at Ottawa last autumn there was much more importance attached to our capacity as representatives of the Cattle Breeders' Association than as representing one single breed, and for many years I felt that we were laboring under a great disadvantage that we have not a more efficient and active organization in that line. The Minister repeatedly put it to me whether I was then speaking for the cattle breeders in general or for one single breed. I was able definitely to say I was speaking at that particular time for the Cattle Breeders' Association, and I am pretty certain that representations would come much more forcibly through such a source than through one single association.

Mr. Hobson. The motion could be amended for the committee to act with committees from other associations which have the same object in view. There should be a Cattle Breeders' Association, and any representations made from such an Association would have more effect, and with more likelihood of bringing about better results.

The President: We as a Shorthorn Breeders' Association can appoint our delegates, but we cannot appoint delegates for a Live Stock Association. There is such a one, and in which I hold office, and Mr. Hobson does, too, I think. We were organized, and the Shorthorn Breeders' Association was asked whether they would become members of the Association, and we were authorized to work in unison with them, and at that time I pledged $10 for this Association towards the expense of getting the thing in working order. I do not know whether it has been paid or not, and that is the whole trouble. We have a Live Stock Association fully organized, and we only lack the money to make it go. There is no subscription; they tax each live stock organization, for instance, the Shorthorn, Ayrshire and Hereford breeders', $10 a year, and we were to ask the Dominion Government to give us a grant of $500 to get it started, and we were under the impression they were going to give us that. That Dominion live stock organization would have been in a great deal better position to talk to the United States, and we would have been in better shape when that pleuro-pneumonia scare came up. They would have referred to this Dominion Association and got an expression from them that would have been official when they represented it to the veterinarians in Great Britain.

Mr. Hobson: It would be well if the Directors of the Cattle Breeders' Association were called together, we could then move in the matter. If we could get it started there is certainly some machinery that might be put into operation which could bring about some good results. As it stands now, the Secretary, I know, has paid out of his own pocket all that has been paid and I think he should be recouped. The Shorthorn Association is bound to pay $10 towards recouping the secretary for what he has done. He has paid postage and found stationery.

The President requested Mr. Hobson to take the chair while he addressed the meeting. Mr. Gibson then said: The credit of this Association is pledged to the amount of $10, and if it does not see fit to pay that I will pay it myself. When we met at the Rossin House and organized the Association, I pledged our Association to the amount of $10.

It was moved by Mr. Jas Russell, seconded by Mr. Shaw, and resolved that the Association pay to the Cattle Breeders' Association the sum of $10.

It was moved by Mr. Robt. Miller, seconded by Mr. H. Smith, and resolved, that the incoming President, Mr. Richard Gibson, and Mr. Henry Wade be a committee to confer with the Agricultural Department at Ottawa, and place before it any suggestions advisable that may assist them in having the unfriendly regulations of the United States Treasury Department with regard to the acceptance of our certificate of registration by their Customs Department removed.

ARE SHORTHORNS AS GOOD AS THEY USED TO BE?

By Robert Miller, Brougham, Ont.

The above question is so often asked that perhaps no paper that I might read here to day would be more interesting to a majority of the Shorthorn Breeders in Canada than one attempting to answer it.

Men new in the breeders' ranks, and young men, are not the only ones who ask this question; but many who have had long years of experience ask it, and proceed to answer in the negative and defend their belief. While this may work no harm, as I believe it is always better to speak out on matters of interest to the majority, yet I think it would be a source of satisfaction to all who have the interests of the breed at heart if they were convinced that Shorthorns are not only as good but better than they used to be; and we

we may learn a good lesson by looking back in comparing and figuring how to avoid mistakes and repeat successes in the future.

When conversation turns to Shorthorn subjects and flows in a retrospective channel, Queen of Athelstane, Rosedale, Violet's Fourth and Butterfly's Duchess, are sure to be mentioned, together with an equal number of bulls that were prominent in the same days, and we hear the statement that no such cows and bulls are seen now. We are all free to admit the excellence of those animals, but is this the test that is to be applied? If so, we should merely have to compare the showyard animals of the distant past with those of the present, and I am sure that even this test would not prove any cause for dissatisfaction with the results attained. The great cows named above stood out pre-eminently above their competitors. Those that won before their day were not so good, those that won immediately after them were not such shining lights. We can only then in justice to the present time compare the best with the best of that period. Having Nonpareil, Isabella and Rose of Strathallan 2nd, may fairly be called stars of the present decade, and while it is unnecessary to say that they were better, they were certainly in every way as good. In their showyard cover they were surrounded by large classes that were worthy competitors, and they showed their superiority by being able to breed on, each having produced winners to perpetuate their names.

We do not hear the other classes discussed by those who had such a delightful impression made on their memories by the queens of the past, not because they would willingly do an injustice, but because no other classes of those days charmed them as the matrons did, and it is from this lack of memory that the present suffers in comparison.

Can any breeder remember seeing such classes as our yearlings and calves have made in the past five years in Toronto? Even if a person were prejudiced, "no" must be the answer. But the claim might be made that the classes were small then because the breeders were few; so I will venture to say that the first prize winners of twenty years ago could not compare with the winners of the present. The bull classes of the present decade have also furnished animals superior to those shown years ago, and this can be accounted for partly, by the best being imported or purchased by those who exhibit to nearly as great an extent as years ago—which practice is not followed to so great an extent in females as formerly—and partly from the improvement made by our own breeds. There are not as many professional showmen now as in years past—men who searched the shorthorn world for the best regardless of cost, and many of the foremost breeders take no part in the showyard contest. Thus many of the choicest never appear in public and those retained and shown by their breeders necessarily appear in a limited area.

While the showyard records cannot be ignored for the purposes of comparison, yet they do not supply the only means of judging between the present and the past.

A few good animals do not make a herd, and it is in the general excellence of the whole herd that the value lies. Where all the animals are good, scientific breeding and good judgment are bearing fruit, and this is where the shorthorns of the present day so completely overshadow those of the past, in their uniformity of smoothness, growth, constitution and general character. Breeding Shorthorns, like the breeding of other classes of domestic animals, has been reduced to a science, founded on the principle that like begets like. If the form that is to be begotton is honestly inherited, two animals whose ancestors were not like each other and not like the offspring when mated together could not be relied on to produce of their own kind; and while the product might be an extraordinarily good animal it would just as likely be extraordinarily bad. Such mating would not be according to approved or scientific methods, but would be haphazard or chance breeding, and this is the kind of breeding to which can be attributed many of the phenomena of the olden times. They were produced by accident, and they towered so high over their brothers and sisters and mates in the herds that we were impressed to such a degree that their companions were overlooked or forgotten. When two animals were mated, one being of a very good type but perhaps small, the other being of great size and not so smooth, the progeny might embody the finish of the former and the extreme size of latter, an accident in breeding, but still a great show animal. A male and female might be

mated that were of the same size and form, but their ancestors were of all imaginable shapes and sizes. The calf might take its form from a granddam on the one side and its size and gaiety or style from a grandsire on the other and be a wonder, but after all only an accident. Such an animal cannot breed on, thus we can account for many of the best individuals being absolute failures in the herd.

A male or female of abnormal size, such as are often found in great winners, could not possibly be descended from a long line of ancestors such as themselves, so that they could not be expected to produce their own kind They are accidents in breeding and their work will be haphazard and full of chance. Breeding on the advanced methods of the present day has produced the uniform classes of our great exhibitions and it has produced our uniform herds, not in a short time but after many years of perseverance, with our ideal clearly before us. The animals composing those classes and our herds having been bred in a majority of cases from such as themselves, can be relied on to reproduce, and while we may not always produce show animals we can confidently depend on never producing a really bad one.

While it is unnecessary to deny that many of the old times animals were grand, it would be impossible to deny that a great proportion of the pure-bred cattle were no credit to the name, and if the latter were bred without intention the former must to a great extent have been accidental as well.

Let us then take encouragment from the fact that the general excellence of our present day herds is far beyond that of those that were in existence during what is termed the palmy days of the cattle trade, and that if we have made such improvment in the past it is within our power to go on improving. Let each and everyone here lend their assistance to that end. Like the attempts to reach the North Pole, the nearer we come to our ideal the greater are the difficulties to overcome, but unlike them in this, that every step forward is a material benefit to mankind.

It was moved by John I. Hobson, seconded by Mr. Gardhouse, and resolved, that this meeting recognizes the value of the paper, and that Mr. Miller be tendered the thanks of this meeting, and further that it be an instruction to have it embodied in the report of this Association.

Mr. Miller warmly thanked the Association for their kind vote.

Election of Officers.

The election of officers resulted as follows :

President: Arthur Johnston, Greenwood, Ont.

Vice-Presidents: James Russell, Richmond Hill, Ont.; Hon. D. Ferguson, M.P.P., Charlottetown, P.E.I.; James A. Cochrane, Compton, Que.; J. E Ladner, Ladner's Landing, B.C ; J. E. Smith, Brandon, Man.; Malcolm McInnes, N.W.T.: Josiah Wood, M.P., Sackville, N.B.; Prof. George Lawson, Halifax, N.S.

Executive Committee: A List—E. Jeffs, J. I. Hobson, H. Smith, T. E. Robson, and R. Miller. B List—W. G. Biggins, Clinton ; J. L. Cowan, Galt ; James Tolton, Walkerton ; Wm. Linton, Aurora ; F . I. Patten, St. George. C List—Herbert Wright, Guelph ; John Isaac, Markham ; W. G. Pettit, Freeman ; D. D. Wilson, Seaforth ; C. M. Simmons, Ivan.

Mr. Arthur Johnston, the President elect, was then conducted to the chair, when he addressed the meeting as follows : I feel very much the compliment you have paid me. I hold no office in any other association, and I covet none. It is one I will not cease to thank you for. I will do all I can in the interests of the Association in general, and will never consider my own interests where it is possible as long as I am your president or in any other official capacity There is a new movement I have considered in connection with this Association. I cannot do better than call your attention to it now, and that is in regard to the vice-presidents. I think it is a matter of no consequence about many of these. The best men in the Associations should be elected to

these positions with as near an approximation as possible in localizing them. What benefit have we derived from these positions, say in Prince Edward Island or other places? There should be a first vice-president and at least a second and third, coming from wherever the members of this Association thought would best advance the interests of the Association.

Mr. HOBSON: Mr. President, I think you are right, although I would not have thought of suggesting it myself. I do not know whether these vice presidents are of much value to the Association.

The SECRETARY: Since the inception of this Asscciation we have had vice-presidents in the different provinces in case we had any trouble and wished to investigate the pedigrees, and these gentlemen could take an active part in doing it. I suppose one-half or two-thirds of them are cool, active men.

Mr. JEFFS: I had the honor of nominating Mr. Ladner on the first occasion, and he by some means found out I was the mover, and he wrote me a letter saying he considered it an honor, and he would do anything he could in that locality.

Mr. HUNTER: There was some consideration given to that, and I think it would be injudicious for us to change it. We might appoint three vice-presidents, but I think we should adhere to having a representative in each of the provinces.

Mr. ROBERT MILLER: I will give notice of motion that I will move that three general vice-presidents be elected in addition to the officers already in existence over this Association at our next annual meeting.

Mr. JEFFS nominated Mr. Ficht to fill the vacancy of "C List" in place of Mr. James Russell, of Richmond Hill, who had been elected to an office.

Mr. ROBERT MILLER nominated Mr. Wright, who was elected.

Delegates to Toronto Industrial Exhibition: Hon. JOHN DRYDEN and JOHN I. HOBSON.

Delegates to Central Farmers' Institute: Mr. JAMES M. GARDHOUSE, Highfield.

Delegates to Western Fair: Messrs. R. GIBSON and C. M. SIMMONS.

TESTIMONIAL TO THE RETIRING PRESIDENT.

Mr. HOBSON: I wish to suggest for the consideration of this meeting, whether it would not be the right, proper and courteous thing to do to make some presentation in the way of a testimonial to our ex-President. I know enough of the working of this Association and of similar associations to be fully aware of this fact, that no man can occupy the position of president without being a considerable loser by it. He gives his time and to a not inconsiderable extent does he give his money. I move that this be done. A presentation to be given, the amount of which not to exceed $50, and that he be elected a life member of this Association. Seconded by Mr. LINTON, and carried unanimously.

Mr. HOBSON moved, seconded by Mr. R. MILLER, that the Executive Committee be instructed to carry out the wishes of the Association in regard to the testimonial to be tendered ex-President R. Gibson. Carried.

The meeting then adjourned.

A meeting of the Directors of the Dominion Shorthorn Breeders' Association was held in the Parliament Buildings, Toronto, on the 8th, March, 1895, at 2.30 p.m.

President ARTHUR JOHNSTON occupied the chair.

Among the members present were: Messrs. Robert Miller, Brougham; C. M. Simmons, Ivan; John I. Hobson, Mosboro'; Wm. Linton, Aurora; M. G. Pettit, Freeman; James Russell, Richmond Hill; Dr. F. J. Patten, St. George; John Isaac, Markham; Henry Wade, Secretary, Toronto.

President JOHNSTON: The principal object in calling this meeting is given in the letter from the Secretary. Aside from that object I may mention the Executive Committee have held two meetings, and they have a short report to present to the Board.

Mr. HOBSON, Secretary of the Executive Committee, read the report.

Dr. PATTON: What salaries are being paid now?

The PRESIDENT: Mr. Denison $700, Mr. Laws $600, Mr. Wade, Jr., $520.

Secretary WADE: What I wanted to let you understand was a great deal of the extra work will be clerical work, and if it is the object to save a large amount of money I say that can be done by typewriters who do not understand pedigree business. That is all I wanted to throw out. I can keep two people at work profitably.

Mr. HOBSON: Do I understand then, Mr. Wade, you think, the work could be more economically carried out with one of the two higher clerks and an extra typewritist in the place of the other?

Secretary WADE: Yes.

Mr. HOBSON: A typewritist in the place of one of the two higher clerks?

Mr. WADE: Yes. As regards the Eleventh Volume we had it nearly completed. A great many of these pedigrees are hard to get.

Mr. SIMMONS: I move a clause be added to the report that the Executive Committee have power to make this change, as suggested by Mr. Wade, and have the power to dismiss one of the clerks and substitute another in his place.

Mr. SIMMONS: I will add to my motion that Mr. Denison, or whoever the Finance Committee dismisses, receive three months' salary.

Dr. PATTEN: I will move as an amendment to the amendment of Mr. Simmons, that the report be referred back to the Committee with full power to deal with it as the Committee thinks best.

Mr. MILLER: Would it be necessary at all to give to that Executive Committee by this same motion power to act in other matters that are not mentioned in the report, if anything should turn up in the meantime?

President JOHNSTON: I think it is quite comprehensive enough.

On the President putting the motion of Mr. Simmons to the meeting it was carried.

It was moved by Mr. RUSSELL, seconded by Mr. HOBSON, and adopted, that all parties holding certificates for the 11th and 12th Volumes, be notified by the Secretary to forward them to him.

Mr. PETTIT: The only way to get at the pedigrees, is to have the Secretary correspond with the breeders. I have some animals and I forget what their names are; people have bought them and gone away and I question much, whether an advertisement would ever touch them. I could correspond with them, and may, in the course of two or three months, get them.

Mr. MILLER: In regard to how the circular should be drawn up, I take it would be impossible to print any pedigrees in the outgoing volumes, without the breeders, I think, or the present owners could show a certificate that they had been sent in for registering, and that the fees had been paid, so I think it would be well, to state in that circular that is sent out, that in order to have the pedigrees appear in the coming volume, or any volume, they must at once produce the certificate of registration.

It was moved by Mr. MILLER that the meeting adjourn. Carried.

At 3.10 p.m. the meeting adjourned.

AYRSHIRE BREEDERS' ASSOCIATION.

The eighth annual meeting of the Dominion Ayrshire Breeders' Association was held at the Albion Hotel, Toronto, the 7th February, 1895, at 11 o'clock a.m.

The President, Mr. William Stewart, of Menie, took the chair and called the meeting to order.

Among the members present there were: Messrs. James McCormick, Rockton; Joseph Yuill, Carleton Place; R. G. Steacey, Lyn; W. J. Crosby, Campbellford; W. W. Ballantyne, Stratford; Wm. M. Smith, Fairfield Plains; F. W. Taylor, Wilmot's Corners; Thomas Guy, Oshawa; John Weld, London; H. E. Eyre, Harlem; George Fulton, J. Crawford, Brown's Corners; Henry Wade, Secretary, Toronto.

Moved by Mr. McCormick, seconded and carried, that the minutes of the last annual meeting be taken as read.

The Secretary then read his annual report, which was adopted by the meeting on motion of Mr. James McCormick, seconded by Mr. Joseph Yuill.

The copy of this report was destroyed in the fire that occurred on the 3rd of March, when all the papers in the office of the Secretary were destroyed. The following brief allusion to it is taken from *The Canadian Live Stock and Farm Journal.*

"The Secretary's report stated that the second volume of the Herd Book had been issued, containing the pedigree of all animals recorded up to 1894, and that during the past year there had been 721 registrations made, that the receipts had been $167 89, and expenditures $150.55, leaving a cash balance on the 1st of January, 1895, of $7 34 on hand."

Mr. W. W. Ballantyne moved, seconded by Mr. Yuill, that the meeting adjourn to 1.30 p.m. Carried.

At 1.30 p.m. the meeting resumed.

The President: I am glad to see so many present to-day, and to recognize the faces of several new members with us. In looking over the *Farmer's Advocate* I noticed at the American Association there were fifty members present and some $2,600 in the treasury. This, of course, we are far behind in, but when we remember that at the World's Exposition, when we came face to face with our American cousins in the matter of prizes, out of $2,035 I think there was a paltry sum of $150 divided amongst them, so if they are ahead of us in the membership and in the treasury, they are far behind when it comes to the show of animals.

Mr. Eyre: I think there is a possibility of there being a slight error in the report about the prices being lower.

Mr. McCormick: My prices have been higher.

Mr. Yuill: My prices have been higher than ever before. I think it would carry out the idea better if the report read "prices ruled higher."

Mr. Ballantyne: I think the members that have expressed themselves are right in that the prices have been higher.

Mr. Guy: Prices during the year have been maintained if not exceeding those of former years.

The report was amended so as to read, "Capital prices were obtained," etc.

DESCRIPTION OF AYRSHIRE POINTS.

By Mr. W. Stewart, Jr., Menie, Ont.

In judging cattle of any description reference must always be had to the characteristics of their breed. Thus, while all cattle are judged by certain undeviating standards as respects feeding and growth, beef cattle must be judged from a beef-making standard

and dairy cattle from their milk producing powers. It is more than probable that "weight for weight" the Ayrshire cow, being of medium size, will produce more milk than any other breed. In selection no surer test can be had than a careful study of her points.

Usefulness.

The usefulness of the dairy cow is in her udder, and towards the udder, its shape and its yield all the capabilities of the cow should be directed We must look upon it as a reservoir for the milk. As such, it must be large and capacious with broad foundation, extending well behind and forward, with distinct detachments, broad and square, viewed from behind, the sole broad and level, the lobes even sized, the teats evenly distributed, the whole udder firmly attached, with skin loose and elastic. Such a form gives great space for the secreted milk and for the lodgment of the glands, while allowing for the changes from an empty to a full vessel. The glands should be free from lumps of fat and muscle, and be well set up in the body when the cow is dry, and loosely covered with a soft and elastic skin without trace of flabbiness. Such a covering allows for expansion when the animal is in milk, while the glands are kept in proximity to the blood vessels that supply them. The necessities of the lacteal glands are larger supplies of blood from which milk can be secreted, and this harmonizes with the demands of the udder as a store house; for broad attachments mean a broad belly or abundance of space for the digestive organs, from which all nutriment must originate. The blood is furnished to the glands of the udder by large and numerous arteries, as secretion. For the freedom of supply of blood to the part and a copious flow, we find branches coming from different arterial trunks and freely communicating with each other, although their arteries are internal and out of sight. Yet, fortunately, the veins which carry the blood from the udder pass along the surface, and by their size and other characteristics indicate the quantity of blood, not only which they carry away, but which must have passed through the glands from the arteries. These return veins pass both backward and forward; those passing forward are known as the milk veins, and the size of these superficial veins, on either side of the belly and the size of the orifices into which they disappear are excellent points to determine the milking possibility of the cow. Still better is it to find in addition veins in the perineum which also return from the udder, prominent and circuitous.

Escutcheon.

The escutcheon is now generally conceded to be a good indication of milk in the cow; this mark is sufficiently known not to require description in detail. I think a broad escutcheon is fully as good a sign as a long one, the quantity and quality mean more than shape. I would not, however, discard the shape entirely; one error must, however, be avoided. It may be well to compare the size of the escutcheon of cows of one breed, but never to compare the size of the escutcheon of cows of different breeds. I think this point means more in relation to size in the Ayrshire than in the Holstein, and am certain while it may be safe to follow it in the Ayrshire in the majority of instances it would be equally unsafe to adopt it in selecting a Shorthorn, for the obvious reason that that breed has been bred for generations for other purposes than those of the dairy. The udder and its dependencies, the milk veins and the escutcheon may be considered the foundation of the Ayrshire cow. These points are important, and also the shape of the body and the form of the animal. The milk vessel is placed in the pelvic region of the cow, and is protected on either side by the hind limbs. The breadth of its attachments secures breadth of body, and the weight requires also a depth of quarter and of flanks, the breadth below requires breadth of hip above and the length of loin here appears related to the length of the pelvis. So much for the physical portion. The physical function of milk-producing demands a great and continuous flow of blood, so to speak. This flow depends on the supply of food and the faculties of digestion. To gain this a large body is required in order to hold the suitable digestive organs. To gain further room for these we desire to see arched ribs, depth, yet no heaviness of flank and breadth of hips, which we see was also required for the broad udder. To sustain this body a strong, firm back is needed

to gain the most of our blood after it has absorbed the chyle from the digestive organs. Reason shows that it should find its way freely and speedily through the system on its labors of supply and removal, cleanse itself in the lungs and again pass on to its duties. All this points to a healthy heart not cramped, and lungs of sufficient capacity, for the yield of milk draws much nutriment from the system, and the constitution must needs have the vigor given by a healthy and active heart and lungs ; in this way the chest is correlated with the udder. The reproductive functions require hock bones of good size, and a broad pelvis is desirable, as underlying within are the generative organs, and any defects here are not to be shunned. Thus the necessities of the body of a good milking cow require the wedge shape, and this not only from the flanks but also when viewed from above.

Mr. Ballantyne : There is one thing I do not understand properly and that is escutcheon. I have come to the conclusion there is not much in it. I would like to ask you, Mr. President, to give us a description of what you think a good escutcheon is.

Mr. McCormick : I take something the same view of it. You will find different cows have different escutcheons. It is merely a French theory ; it never originated in Scotland at all. I have cows where it spreads well on the thighs, there is like a little curl out on the thigh. The Ayrshire cow perhaps requires to be wedge-shaped in two ways ; if you look from behind you will see the wedge shape there ; step forward and look back and the depth of flank running down makes the wedge the two ways. If it is not there is something wrong. Of course there are some cows that carry that characteristic of the breed out more than others, and I suppose all other breeds are the same way. I have little or no confidence in the escutcheon, although I like to see it very well.

The President : In regard to the escutcheon mark, it is only one point. We may find a good escutcheon in an animal, and it may be the other points are just as far from that. What I want to get at is a good escutcheon, and have the other points in proximity with it. One point is not going to rule, we want all points in contrast. I like a good thigh escutcheon, turned well out and have a good curl there. I like to see it run well up but not at the expense of the thigh. I would not choose a cow with a good escutcheon unless she had the other points. I want a loose frame all through. I do not want a cow that is too close in the joints every way.

The Secretary : Do you find the contour in the different milk breeds the same? Is it peculiar to a milk breed more than to a beef breed?

The President : Oh, yes.

The Secretary : I have seen a good escutcheon on a Shorthorn.

Mr. McCormick : One time the Shorthorns were thought to be good milkers. I think the results that have been shown during the past few years shows they are breeding for beef, and that is what they are more adapted for.

Mr. Yuill : One of my subjects which I took up in our institute work was the points of an Ayrshire cow. As far as I could learn those who do put a good deal of stress on it—I do not say I did—say we have the three distinct escutcheons. We have the long narrow, which denotes a cow which will give milk up towards calving, we have the square, which denotes a cow which would give a neat flow of milk for a short period, and then the heart-shaped or medium, which denotes a cow that will milk an average length of time and excel as a persistent milker. We know that habit does a great deal to a milk cow. One instance does not prove a theory is wrong is the point I would like to bring up. A cow with the long escutcheon may have got the habit of drying up early from habit in her younger days, or she may have it from some other cause. Her digestive organs may not have been sufficient to support the calf and keep up the flow of milk, so that cow would dry off. But in purchasing I would look at it the last thing, if she had everything else that agreed with such description—if she had a large mouth and nostrils and had a capacity to hold everything. I would not take a cow with a small mouth and narrow ribs and small every way simply because she had a good escutcheon.

Mr. BALLANTYNE: In reference to the horn, would you prefer a good strong horn or a medium fine horn. Imported cattle that have been brought out for years have had stronger horns than those here.

Mr. MCCORMICK: The better constitution is with the strong horn than the fine horn, but I never heard any argument or reason offered than a mere statement of the kind. And the shape of the horn ought to make a difference in a man's decision.

Mr. YUILL: Some people say they god tired of the small horn and crossed them with the West Highlander and that gives the stronger horn. I have no doubt it gives a stronger constitution, because the West Highlander had a stronger constitution than the Ayrshire.

Mr. EYRE: We have in our herd heifers of the same parentage, one of them has fine horns rising upon the head and almost turned around, admired by some and condemned by others. And some with horns standing well out and going up. The first one I thought had hurt herself but I do not now think it was any accident. In regard to the escutcheon I think it is conceded by all it is more than a fancy, and that taken in connection with other points it is a pretty safe indication for purchasing.

Mr. YUILL: I will read the result of a test that has been conducted in the State of New Hampshire. They wanted to find out which was the most profitable breed of cattle, and they tried representatives of four leading breeds, the Ayrshire, Jersey, Holstein and the Durham, and I need not delay you with all the particulars of the test, or the weight of milk or the percentage of fat, but I will give you the general results. The Ayrshire made one hundredweight of butter with $3 less feed than the Jersey, the Durham required $4.50 more than the Ayrshire did, and the Holstein required $5.50 more feed to make one hundredweight of butter than the Ayrshire. This test lasted for twelve months, so I think we may conclude it was a fair test. There were four animals in each test. I cannot tell when the test closed. It was conducted by the State of New Hampshire Experimental Station.

Mr. MCCORMICK: No doubt you have gone to some trouble to make a standard in judging, but the great trouble I find is each man wants a standard of his own. My trouble in this would be if we did undertake to judge by standard the feeling would be akin to something that was not very pleasant. I see the Americans have done away with the standard of points.

The PRESIDENT: With regard to this standard, there is certainly something wrong with the way the judging is done. When an animal takes first prize or second or whatever the prize may be at one show, say the Industrial Exhibition, and goes, perhaps, to London, or Ottawa, or Montreal, and takes second or third or nothing at all against the same stock as competed before, there is something wrong in it, and I would advocate a standard whereby the public can see whether the judge is doing his duty or not. Let the cattle all be brought out after they are judged and the score cards show just whether the judge has done his duty or not. Then it is under the criticism of everybody; he has got to do his work right. This is a score Mr. Shore and I made out this winter, and I will read it to you. I have a simple system of scoring, not the cumbersome, unintelligible scheme of fancy points but a simple classing and valuing of certain essential points, for instance, in the cow of one of the various breeds the characteristics might be divided thus: Character, beauty, form, thirty-three points; constitution, quality, thirty-three points; milk, production, general utility, thirty-three points; maximum ninety-nine points. In judging, these points would have to be valued and noted by the judges who should draw out the animals and place them according to their awards, and the attendants would be notified to bring each prize winner with the whole class of breeds and then the whole class could be brought out and the card with the score each winning animal had made could be placed on each so the spectators could examine animals and compare notes. It would furnish information that each breeder old and young would profit by, while it would be a check upon the present loose system of making decisions, as to the reason for which half the judges can never give a satisfactory answer. Each Breeders' Association could get up a suitable scale of points, and this of itself would be a step in

advance, for many breeders are fumbling in the dark inasmuch as the decision given at one show is likely to be turned upside down at the next.

Mr. McCORMICK: You will often see two cows in the ring, and it would be hard to say which was the better; and there are often two men who will judge those two animals differently and each be right.

The SECRETARY: It would require a good judge of cattle to make use of this scheme. Any ordinary man could not go in and take the scale of points and say which is the best cow without a good eye and be a good judge.

Mr. YUILL: I think there is something wrong with our present system of judging; but the question is how to put it right. In poultry Associations we do not find the same thing we find occurring in cattle. A fowl will score within a point no matter whether it is the same judge or not. We have not reached the same perfection with cattle. A point came under my observation not a great while ago. There was a single judge at an exhibition who gave the first and second prizes to two heifers, and also there were two bull calves got first and third prize. The same cattle were taken to another exhibition, the same judge went with them and had another judge in company. These animals were judged again and those two heifers got nothing at all, and some cattle that got nothing at the first exhibition got first and second prizes at the second exhibition.

Mr. EYRE: Had we better not decide whether we want a standard or not. The standard is for judging at exhibitions. We will have a standard here, and the Association in Quebec will have another standard. At Ottawa those breeders will come up and the standards will differ and it will create confusion.

The PRESIDENT: If they come to our Province they will have to submit to our standard.

Mr. EYRE: Would the Toronto Exhibition take our standard if they thought it would keep the Quebec men out? I beg to move we should have a standard of excellence in judging cattle. Seconded by Mr. W. W. BALLANTYNE and carried.

It was moved by Mr. W. W. BALLANTYNE, seconded by Mr. EYRE, and resolved that a committee composed of Messrs. Stewart, Yuill, McCormick, Ballantyne, Guy, Wade and Kains, form a new standard and report at the next annual meeting.

It was moved by Mr. McCORMICK, seconded by Mr. YUILL, and resolved, That the members of this Association have heard with a great deal of sorrow of the death during the past year of a past President and constant member of this Association from its inception, the late David Nicol, of Cataraqui. He was also the owner and successful exhibitor of a fine herd of Ayrshire cattle. He will be remembered by us for a long time to come, his genial face and his good traits will never be forgotten. Would also recommend that the Secretary prepare a copy of this resolution and send it to the family of the late Mr. Nicol.

The PRESIDENT: I wish to draw your attention to a matter of some pedigrees that have been entered in our Herd Book that are not worthy of their place. It appears there have been twin heifers registered, sent to Mr. Wade, their sire being Lord Lyon. Mr. Wade wrote the owner, stating that he could not register them in the first book, and the gentleman himself called on Mr. Wade a few days later and stated that it was a mistake that the sire that was given, Lord Lyon, was not the sire of the heifers, but that Sir Garnet was. Mr. Guy will remember the bull he sold, Sir Garnet and the Spotted Butterfly, in Prince Edward County. This bull was bought by this gentleman from Mr. Guy, was retained in his herd for several years and was sold to Mr. Hume, a neighbor of mine, and had gone to the butcher years before these heifers were born.

Mr. YUILL: For the last year or so the railway companies have required that a person shall go with each single animal, if the animal is to be shipped more than one hundred miles. I find that a great grievance.

The SECRETARY: I think it is dying away. On the Grand Trunk they do not require that.

It was moved by Mr. McCormick, seconded by Mr. Yuill and carried, that Secretary Henry Wade correspond with the other Associations to see if this trouble can be remedied in any way.

The President: In reference to the division of prizes at the Toronto Industrial Exhibition and other places, the Shorthorns get from $40 to $60, the Ayrshires get from $10 to $25 or $30, as the case may be. There is certainly something wrong about this. Our cheese product is one of the greatest exports we have, and our beef industry has gone down so low now there is no money in it scarcely. Why encourage that industry and not encourage cheese industry, which is bringing into the country a great many times over what the beef is? The committee that is appointed to attend the Industrial meeting should make it a strong point to at least get the prizes even with the Shorthorn breeders.

Mr. McCormick: I have been endeavoring ever since I have been on the Board to get the same thing. Every time I have pointed out where we were wronged, some would say, well, part of the cheese industry is ours, too. It is very hard work when one is fighting against so many. Last year we were asked to throw off ten per cent. when we came to revise the prize list, owing to the large interest the Association was paying at the time, and because the Shorthorns had thrown off ten per cent. The Holsteins were behind again, and were trying to get a little more, and they gave them a trifle. Dr. Smith, the chairman, asked me if I wanted anything, and I said I would waive it this year. When we come to the general meeting they put on the dollar for entrance fee in place of fifty cents. This was the general Board, not the revising committee. I move that Mr. Wade communicate also with other Breeders' Associations to see if anything can be done in the matter and lay it before the Industrial Board. Seconded by Mr. Yuill. Carried.

Election of Officers.

President: W. W. Ballantyne, Stratford.

Vice-President for Ontario: H. E. Eyre, Harlem.

" *Quebec*: W. C. Edwards, M.P., North Nation Mills.

" *Manitoba*: George Steele, Glenboro', Man.

" *North-West Territories*: Claude H. Manners, Moosomin, N.W.T.

" *British Columbia*: W. Wells, Chilliwack, B.C.

" *Nova Scotia*: C. Archibald, Truro, N.S.

" *Prince Edward Island*: C. C. Gardiner, Charlottetown, P.E.I.

Directors: Joseph Yuill, Wm. Stewart, R. G. Steacey, James McCormick, John Crosby, W. M. Smith, Thomas Guy.

Auditors: G. D. W. Green and G Thompson.

Delegates to Toronto Industrial Exhibition: McCormick, Stewart and Ballantyne.

Delegates to Western Fair: M. Ballantyne and A. Kains.

Delegates to Ottawa Exhibition: Joseph Yuill and J. C. Smith.

Judges: M. Ballantyne, St. Marys; H. G Clark, A. Kains, Byron; James McCormick, Rockton; H. E. Eyre, Harlem; Wm. Stewart, Menie; John Crosby, Campbellford; Wm. Hunter, Lancaster; W. M. Smith, R G. Steacey, Thos. White, Branchton; Alex. Hume, Burnbrae.

It was moved by Mr. Eyre, seconded by Mr. Yuill, that it is the opinion of this Association of Ayrshire Breeders that being dehorned should not militate against an animal in the prize ring.

Mr. Eyre: I have some of my cattle dehorned, and I think it is safe sometimes to have a bull dehorned. There is one thing sure, it does not make a man take the horns off his animals; and if a man thinks he should have the horns taken off his stock, and if it does not hurt the stock, it seems to me it should not be a disability as far as the winning of prizes is concerned.

Mr. McCormick: I do not think it will make any difference whether that resolution is passed or not. I do not think a man would judge against an animal because the horns were gone.

Mr. Yuill: In support of the motion I would say I feel like Mr. Stewart. I have not mine dehorned, and in the case of some I would not take twenty-five dollars and have their horns off; but at the same time I would say if the horns were taken off it should not make any difference in the prize ring.

Mr. Stewart: In our section one man I know has dehorned upwards of two thousand cows this winter, and it caused no material damage to the cows. It is a benefit where there are a lot of cows running together. But it is another thing when you come to dehorn a herd of pure-bred Ayrshires.

On the motion being put to the meeting it was lost.

Moved by Mr. Yuill, seconded by Mr. Eyre, and resolved, that a vote of thanks be tendered to the retiring chairman, who has presided over the Association for the last year with ability, and who has made his mark as an exhibitor at the World's Fair.

At 4.40 p.m. the meeting adjourned.

Saturday, June 29th, 1895.

A meeting of the Directors of this Association was held in the office of the Secretary:

A communication was read from the Hon. John Dryden, Minister of Agriculture, asking that two delegates be appointed to attend a meeting to be called by him early in September to take into consideration the future conduct of the Herd Book.

It was moved by James McCormick, seconded by Wm. Stewart, and resolved, that W. W. Ballantyne, of Stratford, and James McCormick, of Rockton, be the two delegates.

It was also moved by James McCormick, seconded by Wm. Stewart, and resolved, that the sum of $25 be appropriated from the funds of this Association to the Provincial Dairy Show, to be given for the best Ayrshire female on the grounds, by conformation. The meeting then adjourned.

Agreement.

Guelph, December 12th, 1895.

We, the undersigned delegates from the Ayrshire Breeders' Association, appointed for this purpose, hereby agree to pay the Registrar of Live Stock the sum of 35 cents per pedigree and 10 cents per transfer and duplicate certificate. He to record the animals, issue certificates, and correct proof for the printer.

(Signed) W. W. Ballantyne.
James McCormick.

HEREFORD BREEDERS' ASSOCIATION.

The annual meeting was held at Guelph on Wednesday, the 11th of December, at 2 o'clock p.m.

Members present: Messrs. F. A. Fleming, Toronto, President; A. Waldie, Acton West; Richard Stutt, Forest; H. D. Smith, Compton, Que.; H. Reed, Mimosa; D. W. Green, Toronto; Alf. Stone, Guelph; A. Rawlings, Forest; H. Wade, Toronto, and others.

The minutes of the last annual meeting was read, also the report of the Secretary-Treasurer, as follows, and they were adopted:

Report of the Secretary-Treasurer.

Toronto, December 6th, 1895.

To the Officers and Members of the Hereford Breeders' Association:

Dear Sirs,—We have not had much excitement in this Association for a year or two, and the officers elected in December, 1891, are still in force. We have gone on recording Herefords since that time. We then had 2,000 on record; since then we have recorded 385 head. Unfortunately, however, we lost all the manuscript when the offices of the Agriculture and Arts Association were burnt on the 3rd of March last. Some of the breeders of Herefords—amongst them our President, Mr. Fleming—have sent in all their private records to help us to pick up the chain that was lost, but there are several certificates outstanding yet that have not been sent in to copy. We hope they will be sent in shortly, otherwise they cannot be published. We also lost our list of members. I see by the last reports that we had twenty-six paid members at that time, which means we have $78 in the treasury as a nucleus for increased work.

You will all doubtless be aware that this is the last year of the Agriculture and Arts Association, after fifty years of useful work. It has been legislated out of existance during its half century of work. It has done a great deal for all the live stock associations, and although it has received a yearly income from the Province of Ontario from $3,000 to $10,000 per annum to help the good work, it now dies, leaving an income of $4,000 a year to the same Government in perpetuity.

A circular was issued by the Hon. John Dryden, Minister of Agriculture, last June, asking all the Associations that had heretofore been working in affiliation with that Association to appoint two delegates to attend a meeting of these Associations,to be held early in September. With the consent of the President, Mr. F. A. Fleming, he himself and Mr. A. Rawlings, of Forest, were delegated to attend to this business.

The joint meeting was held on the Fair grounds of the Industrial Exhibition during the second week of September; and all the associations there represented, by resolution promised to fall in with the proposal of the Minister of Agriculture, which was as follows:

That the Government, under the Statute, have power to appoint a Registrar of Live Stock, who will have an office in the Parliament buildings, and whose salary will be paid in part directly by the Government, who in that regard take the place of the Agriculture and Arts Association.

The business of that meeting was to confer together with the view of arriving at some definite arrangement as to the payment of the salaries, of the Registrar's salary, and as to the necessary expenditure in connection with the work of registration.

At that meeting the delegates were requested to meet again some time before the 1st of January, 1896, to fix the remuneration of the Registrar. This has, as yet, not been done, but can be at this meeting. Arrangements have been concluded with the different Horse associations and with the Shorthorn Breeders' Association.

My proposal to you is to do the recording for your Association for the sum of 35 cents per pedigree and 10 cents per transfer, leaving the balance of the fees the property of the Hereford Breeders' Association as a fund towards the publishing of the first volume, I to do the preparing and revising of the copy, the Association to bear the expenses of stationery and postage.

Our present membership fee is $3, and another assessment of $3 when occasion requires. I think it should be exacted again from this date. The fees for recording to members, giving them a certificate, is 75 cents; to non-members, $1.25.

H. Wade, Secretary-Treasurer.

Election of Officers.

The election of officers then took place, before which event the President, Mr. F. A. Fleming, informed the meeting that he was not a candidate for that honor this year as the office should not be monopolized by any one man.

The following gentlemen were elected officers for 1895:

President: D. H. Smith, of Compton, Que.

Vice-President: Alf. Stone, Guelph.

Vice-President for N. W. T.: H. A. Muntz, Olds, Alberta.

Vice-President for Manitoba: Sir Donald A. Smith.

Directors: George Brent, Warwick; A. Waldie, Acton West; Richard Stutt, Forest; James Carswell, Renfrew; F. A. Fleming, Weston; A. Rawlings, Forest, Ont.; W. W. Black, Amherst, N.S.; H. Read, Mimosa, and D. W. Green, Toronto.

Secretary-Treasurer: H. Wade, Toronto.

Mr. F. A. Fleming then vacated the chair, and it was taken by Mr. H. D. Smith, the newly elected President.

On motion of Mr. Stone, seconded by Mr. A. Rawlings, a vote of thanks was tendered to the retiring President, Mr. Fleming, and was acknowledged by him in a few eloquent remarks.

Moved by Mr. Stone, seconded by Mr. Waldie, that the delegates, Messrs. Fleming and Rawlings, be authorized to sign the agreement with the Superintendent of Live Stock, to pay him 35 cents per pedigree and 10 cents per transfer and duplicate certificate, he to record the animals, issue the certificate, and correct proof for the printer. It was also resolved that for the future the annual member's fee be reduced to $2, a call to be made for the 1st of January, 1896, and that an occasional assessment of $2 be made as required.

Moved by F. A. Fleming, seconded by A. Rawlings, that the Canadian Hereford Breeders' Association add 25 per cent. to any of the prizes in class six (grades and crosses) at the next Ontario Provincial Fat Stock Show (1896), if such prizes should be taken by Hereford grades or crosses; also that if the championship prize of the show (class seven) should be won by a Hereford or grade Hereford, $25 be added to the prize.

It was resolved that the Industrial Exhibition Association be asked to allow a representative on their committee, and that Mr. F. A. Fleming be said delegate.

Mr. D. W. Green then read a very able paper on

A FEW FACTS ABOUT HEREFORDS.

The serious depression which has spread over the whole world during the last three years, and which has had the effect of lessening the demand for cattle of the beef breeds, has not spared Herefords. For them no claims of being "general purpose" have been urged by their breeders, who has been content to rest the claims of their favorites to public attention on the undoubted merit that they possess of being grazers of the highest

type. That these claims are not unfounded will be admitted by all who have ever tried them on pasture. For a hundred years or more they have had this reputation in England, and, from the earliest time of which we have any authentic record, drovers have visited Herefordshire and the adjoining counties in search of the white-faced steers wherewith to stock the rich pastures of the Midland counties. The fine marbled appearance of the Hereford grass-fed beef, caused by the intermixture of fat and lean in great perfection, causes the beef to be much sought after by the meat-consuming public, while, on account of early maturity, smallness of offal, and compactness of form, they are quite as popular with the butcher. In addition to these valuable features, they are also possessed of hardy constitutions, which enable them to withstand extremes of heat and cold. They are to be found in our Northwest, braving the rigors of the winter there, while in South America and Australia they are equally at home.

I have, so far, only spoken of their merits as "grazers." I will now refer to them as feeders in the stall. One requisite of an animal feeding well, and a most important one, is that it be of a quiet, easy-going disposition. This is a characteristic of most Herefords, as may be seen when one notices their mild, placid eyes; and in the history of the breed there is plenty of evidence to show that they stand out prominently as feeders. They have oftentimes won the championships at the Smithfield and Birmingham Fat Stock shows, and that they are still in the field for business is evident from the very sweeping victory that they won in the sweepstakes for all breeds at the Chicago Fat Stock Show last year, where they won nearly everything for which they competed. This is something for Hereford breeders to be proud of. Again at the Norwich Fat Stock Show held last year in England, the Hereford steer, King Robert, won the chamionship over all breeds of all ages and sexes.

The prepotency of Hereford sires is well known. As a general rule, the offspring of a cross on a grade cow comes marked exactly like the sire, and this fact has enabled unscrupulous dealers to pawn off such on unsuspecting purchasers as purebreds, to the great deteriment of the breed. These Hereford grades retain much of the aptitude to lay on fat possessed by the sire, and make valuable "grazers."

I have said that Hereford breeders have, and I think wisely, declined to class their cattle as general purpose. It is not that there are not some excellent milkers among them, for there certainly are, and a cross of a Hereford sire on a grade cow oftentimes results in one getting a heifer that proves a fine milker; but the general trend of late years has been in the direction of improving the beefing qualities at the expense of the milking. In consequence, the average quantity of milk produced by the Hereford cow is not large, but, at the same time is of very good quality. There was a period in their history when they were noted for their milking qualities, and we read that in 1836, when the Royal Agricultural Society of England held their show at Oxford, first prize for dairy cow was given to a Hereford. Those days, however, are past, and it would take many years of very careful selection in order to win back for Herefords the right to be called "a dairy breed." Whether it would be worth while taking such steps is, at least, open to question.

As regards the future of Herefords, I think that breeders of the "Whitefaces' need not be alarmed. When the price for beef cattle goes up, as it eventually must, then will the demand for Herefords most surely become brisk. Breeders are not likely to repeat the mistakes made during the boom a few years ago, when half-bred Hereford bulls were sold as sires, by the hundreds, both buyers and sellers imagining, because the offspring resemble their sires in color and shape, that, therefore, they would be as prepotent and serviceable as thoroughbreds. The folly of that proceeding was soon discovered, and the discovery did more to hurt the trade in Herefords than anything else.

Such things are not likely to happen again. Once let times improve, and beef cattle sell for remunerative prices, and if Hereford breeders are alive to their own interests and keep up to the times, there is no fear but that they will do a brisk trade, to their own advantage and that of the country at large.

The meeting then adjourned.

APPENDIX A.

LIST OF PRIZES AWARDED.

FAT STOCK SHOW.—GUELPH.

CATTLE—PURE BRED.

Judges.—Thomas Russell, Exeter; T. E. Robson, Ilderton.

SHORTHORNS.

Steer, two years and under three.

1. Jas. Oke & Sons, Alvinston, "Ironclad 2nd"=20469=; red and little white; calved July, 1893; sire, Ironclad=13347=; dam, Ella May =14137=, etc.
2. Thomas Russell, Exeter, "Snowball"=22095=; white; calved Sept. 24th, 1893; sire, Sultan Selim (imp.)=4129=; dam, Jane Grey 2nd=18149=, etc.
3. Jas. Oke & Son, Alvinston, "Jumbo"=20513=; red and little white; calved Nov. 18th, 1893; sire, Ironclad =13347=; dam, Kate Killerby =9382=, etc.

Steer, one year and under two.

1. John Bolton, Armstrong's Mills, "Snowball"=20482=; white; calved Feb., 1894; sire, Duke of Albany 3rd =20481=; dam, Madeline Gloster =18133=.
2. Jas. Oke & Sons, Alvinston, "Roan Price"=20512=; sire, Ironclad =13347=; dam, Rosy Victor =17862=.
3. Jas. Lindsay, Fergus, "Snowball."

Steer, under one year.

1. Jas. Oke & Sons, Alvinston, "Royal Oak"=22367=; roan; calved Dec. 2nd, 1894. Bred by exhibitors; sire, Sir Walter =17442; dam, Euphemia Maid 4th =17533=, etc.
2. A. A. Armstrong, Fergus, Gara —22340=; sire, Oxford Baron 4th =17380=; dam, Cherry 2nd, vol. 12.
3. Wm. Dredge & Son, Nassagaweya, White Cloud =22327=; white; calved March, 1895. Bred by exhibitors; sire, Nassagaweya Chief =19541=; dam, Emmie Elgin =23448=, etc.

Cow or Heifer, three years and over.

1. A. A. Armstrong, Fergus, Matchless =12447=; red; calved ——, 1885; sire, Challenge =2933=; dam, Beauty 5th, etc.

Heifer, three years old.

1. Duncan Stewart, Everton, Mabel (vol. XII); red and white; calved May, 1893. Bred by exhibitor; sire, Red Ribbon =14384=; dam, Duchess of Edinburgh =8919=, etc.
2. Duncan Stewart, Everton, Maud (vol XII); red and little white; calved May, 1893. Bred by exhibitor; sire, Red Ribbon =14384=; dam, Duchess of Edinburgh =8919=, etc.

Heifer, under two years.

1. A. A Armstrong, Fergus, Bloom 3rd; sire, Burgomaster Gloster =11783=; dam, Bloom 2nd.
2. Wm. Dredge & Son, Nassagaweya, "Princess Lula," (vol. XII); roan; calved Oct. 15th, 1894. Bred by exhibitors; sire, Lord Marmion =15171=; dam, Princess Addie =23449=, etc.

Special prize given by the Dominion Shorthorn Breeders' Association, to be awarded to the best registered Shorthorn steer, any age.

John Bolton, Armstrong's Mills, Snowball =20482=. See above.

For best Shorthorn Grade Steer, any age.

Jas. Oke & Sons, Alvinston.

HEREFORDS.

Steer, one year old and under two.

1. Estate of the late F. W. Stone, Guelph, Bullion; sire, Conquest, 45098; dam, Bonny Lass 20th, 92441, etc.

Steer, under one year.

1. Estate of late F. W. Stone, Guelph, Royal; sire, Conquest, 45098; dam, Rosette 11th (E. H. B.), etc.
2. Estate of late F. W. Stone, Guelph, ——; sire, Cherub 4th, 32333; dam, Novella Cherry 14th (A. H. R.)

Cow, three years and over.

1. H. D. Smith, Compton, Que., Josephine 2nd, 52219; sire, Magistrate, 32957; dam, Lady Laura 3rd, 19475, etc.
2. Estate of late F. W. Stone, Guelph, Cherry 25th, 35258; sire, Conqueror (imp.) (19425); dam, Cherry 6th (imp.) (11370), etc.

POLLED ANGUS.

Cow, three years old and over.

1. Jas. Bowman, Guelph, Mysie 2nd of Verulam, 5354; sire, Ermine Bearer, 1749; dam, Mysie of Verulam, 2757.
2. Jas. Bowman, Guelph, Kyma of Tweedhill, 17606; sire, King Kyma, 13544; dam, Mayflower of Tweedhill.

GALLOWAYS.

Cow or Heifer, three years and over.

1. D. McCrae, Guelph, Queenie of Guelph (5736); sire, The Cob (4167); dam, Idle Queen (10507), etc.
2. D. McCrae, Guelph, Caroline (10515; sire, Blackamore (1175); dam, Susan 2nd (imp.) (8573), etc.

DEVONS.

Steer, two years old and under three.

1. W. J. Rudd, Eden Mills, Sprightly, 1042; calved December, 1892; sire, Butler, 983; dam, Violet, 1091, etc.
2. W. J. Rudd, Eden Mills, Red Jacket, 1041; calved June, 1893; sire, Butler, 983; dam, Maude 9th 1100, etc.

Steer, one year and under two.

1. W. J. Rudd, Eden Mills, Victor, 1044; calved May, 1894; sire, Billie, 998; dam, Julia, 1013, etc.
2. W. J. Rudd, Eden Mills, Look Out, 1043; calved December, 1893; sire, Stanley of Preston, 1038; dam Wintergreen, 1098, etc.

Cow or heifer, three years and over.

1. W. J. Rudd, Eden Mills, Fanny 2nd, 1033; sire, Young Ensign, 925; dam, Fanny, 985.
2. W. J. Rudd, Eden Mills, Red Jane, 1022; sire, Job, 985; dam, Rose of Wyebridge, 959.

GRADE CATTLE.

Judges.—Wm. Stark, Berwick; Geo. F. Morris, London.

Steer, two years old and under three.

1. Jas. Oke & Sons, Alvinston, "Caesar."
2. J. R. Caldwell, Fergus, "The Laird."
3. Jas. Rennie, Wick, "Jack."

Steer, one year old and under two.

1. W. H. Nichols, Hamilton, "Clinker."
2. J. R. Caldwell, Fergus, "Billey."
3. Jas. Rennie, Wick, "Harry."

Steer, under one year.

1. Jas. Oke & Sons, Alvinston, "The Deacon."
2. Jas. Rennie, Wick, "Captain."
3. H. D. Smith, Compton, Que., "Whiskers."

Cow or Heifer, three years old and over.

1. Jas. Oke & Sons, Alvinston, "Mary Ann."
2. Jas. Oke & Sons, Alvinston, "Ruth."
3. Jas. Riddoch, Everton, "Milly."

Heifer, over two years old and under three.

1. Jas. Oke & Sons, Alvinston, "Rosalie."
2. Peter Bathgate, Eramosa, "Bessie."

Heifer, under two years old.

1. Jas. Rennie, Wick, "Susie."
2. Jas. Oke & Sons, Alvinston, "Maggie."
3. Jas. Oke & Sons, Alvinston, "Sally."

Championship prize—For the best fat animal on the ground of any breed or sex.

Silver medal by the Agriculture and Arts Association.

If this prize is won by a Hereford, or Grade Hereford with at least two registered crosses, $50 extra, donated by H. D. Smith, Esq , of Compton, Que.

Jas Rennie, Wick, "Susie." (Grade.)

DAIRY DEPARTMENT.

Under Control of the Dairymen's Association of Western Ontario.

Judges.—J. W. Wheaton, Secretary of Western Dairymen's Association; T. B. Millar, Inspector and Instructor for Western Dairymen's Association; G. E. Day, B.S.A., Lecturer on Agriculture and Live Stock, O. A. C., Guelph.

Shorthorn Cow, pure-bred.

1. Herbert Wright, Guelph, "Lady Bright 2nd," =16322=; roan; calved Oct., 1887; sire, Pride of Wellington =7528=; dam, Lady Bright =3384=.

Ayrshire Cow, pure-bred.

1. W. M. & J. C. Smith, Fairfield Plains, "Ada," —882—; red and white; calved Oct., 1885. Bred by exhibitors; sire, Jock —344—; dam, Empress —599—.
2. Wm. Stewart, jr., & Son, Menie, "Jean Armour"—2058—; brown and white; calved 1891; sire, Royal Chief (imp.) —75—; dam, Sprightly (imp.) —1210— (5509).

Holstein Cow, pure-bred.

1. A. & G. Rice, Currie's "Calamity Jane," (imp.)
2. Wm. McClure, Norval, "Aaggie Lady of Luraine," 24423.

Grade Cow, any breed.

1. Jas. Bowman, Guelph, "Rose." (Durham Grade).
2. Hugh McDougall, Guelph, "Nancy."
3. Daniel Keleher, Guelph, "Bluebell." (Jersey Grade.)

SWEEPSTAKES.

Special Prize, Given by The Weld Company (Limited), London, Ont., $25.—Second Special, Given by F. W. Hodson, Guelph, Ont., $10.

Sweepstake Cow, any pure-bred, registered.

1. A. & G. Rice, Currie's, "Calamity Jane," (imp.) (Holstein.)
2. W. M. & J. C. Smith, Fairfield Plains, "Ada," —882—. (Ayrshire.)

Special Prize Given by John S. Pearce & Co., London, Ont., Silver Plate, Value $15.

Best Grade Cow.

Jas. Bowman, Guelph, "Rose." (Durham Grade.)

Special Prize Given by the Sun Publishing Co., Toronto, $10.

Best pure-bred Ayrshire Cow.

W. M. & J. C. Smith, Fairfield Plains, "Ada," —882.

Special Prize Given by The Bryant Press, Toronto, $15.

Best Cow of any weight, breed or cross.

A. & G. Rice, Currie's, "Calamity Jane," (imp.) (Holstein.)

Note.—The list of prizes awarded for pure-bred sheep and swine will appear n the Report of the Sheep and Swine Breeders' Associations.

PROVINCIAL DAIRY SHOW.—GANANOQUE.

JERSEYS.

Judge.—J. C. Snell, Snelgrove.

Bull, three years old and upwards.

1. Mrs. E. M. Jones, Brockville, "Lilimur Rioter," 28999.
2. Mrs. E. M. Jones, Brockville, "Canada's Sir George," 18290.
3. A. D. Delong, Elgin, "Crosby Boy," 25757.

Bull, two years old.

1. Mrs. E. M. Jones, Brockville, "Simcoe Chief," 35,126.

Bull calf, under one year.

1. Mrs. E. M. Jones, Brockville, "Count Frontenac."
2. Mrs. E. M. Jones, Brockville, "Sir George of Belvedere."
3. Mrs. E. M. Jones, Brockville, "Massena's Deputy."

Cow (giving milk) four years old and over.

1. Mrs. E. M. Jones, Brockville, "Gipsy of Spruce Grove."
2. Mrs. E. M. Jones, Brockville, "Miss Satanella 2nd."
3. Mrs. E. M. Jones, Brockville, "Silver Delle."

Cow (giving milk) three years old.

1. Mrs. E. M. Jones, Brockville, "Beauty of Delta."

Heifer, two years old.

1. Mrs. E. M. Jones, Brockville, "Beauty of Delta."
2. Mrs. E. M. Jones, Brockville, "Beauty of Belvedere."
3. Mrs. E. M. Jones, Brockville, "Rioter's Fanciful."

Heifey, one year old.

1. Mrs. E. M. Jones, Brockville, "Carlo's Caroline."
2. Mrs. E. M. Jones, Brockville, "Rioter's Princess."
3. Mrs. E. M. Jones, Brockville, "Idalene."

Heifer calf, under one year.

1. Mrs. E. M. Jones, Brockville, "Jemele 2nd."
2. Mrs. E. M. Jones, Brockville, "Silimen Excelsior 7th."
3. Mrs. E. M. Jones, Brockville, "Massena's Daughter."

SWEEPSTAKES FOR BEST JERSEY COW BY CONFORMATION; PRIZE GIVEN BY THE AGRICULTURE AND ARTS ASSOCIATION. $25.

Mrs. E. M. Jones, Brockville, "Gipsy of Spruce Grove."

AYRSHIRES.

Judge.—John H. Douglas, Warkworth.

Bull, three years old and upwards.

1. D. McLachlan, Petite Cote, Que., "Silver King (imp. dam)—1138—(5809); white and brown; calved in 1890. Bred by A. Mitchell, Barcheskie, Scotland; sire, Traveller (1441); dam, Nellie Osborne (imp.) —2018—etc.
2. Wm. Stewart, Jr., Menie, "White Prince 2nd" (imp. dam)—898—; white with brown spots; calved in 1889. Bred by John Caldwell, Dundonald, Scotland; sire, White Prince (1364); dam, Red Rose (imp.) —1207—(5510), etc.
3. D. B. Johnston, Lansdowne, "Blanco,"—a208—; red and white; calved April 24th, 1890. Bred by H. E. Eyre, Harlem; sire, Morning Star, —461—; dam, Blanch of Devon,—a13—, etc.

Bull, two years old.

1. J. Yuill & Sons, Carleton Place, "Leonard Meadowside,"—1423—; red and white; calved October 18th, 1892. Bred by exhibitors; sire, Baron Mansfield—861—; dam, Lily of Meadowside—1737—, etc.
2. Wm. Stewart, Jr., Menie, "Douglas of Loudoun."—1384—; white and red; calved August 24th, 1892. Bred by D. Morton & Sons, Hamilton; sire, Royal Chief (imp.)—75—(1647); dam, Dandy I (imp.) —1208—(5502), etc.
3. A. Knight, Cataraqui, "Cataraqui Boy,"—1535—; red and white; calved October 10th, 1892. Bred by exhibitor; sire, Sandy,—907—; dam, Blossom —773—, etc.

Bull, one year old.

1. D. McLachlan, Petite Cote, Que., "Silver Prince," 6966; sire, Prince Henry of Barcheskie; dam, Lustre of Barcheskie, 6425
2. Daniel Drummond, Petite Cote, Que., "Glencairn of Maple Grove"; sire, Lord Glencairn; dam, Irene.

Bull calf under one year.

1. Daniel Drummond, Petite Cote, Que., "Matchless," 7560; sire, Glencairn III; dam, Nellie Osborne, 7560.
2. Wm. Stewart, Jr., Menie, "General Gordon,"—1836—; red and white; calved April, 1895. Bred by exhibitor; sire, white Prince II (imp. in dam)—808—; dam, Tidy,—1736—, etc.
3. J. Yuill & Sons, Carleton Place, "Earl Meadowside," —1865—; red and white; calved November 20th, 1894. Bred by exhibitors; sire, Macneil, —771—; dam, Pettie Meadowside, —2783—, etc.

Cow (giving milk) four years old and over.

1. D. McLachlan, Petite Cote, Que., "Maggie Mitchell," 5839; sire, Traveller,—1441—; dam, Annie of Barcheskie (15357).
2. Daniel Drummond, Petite Cote, Que., "Nellie Osborne," 5358; sire, Lessnessock; dam, Randy (imp).
3. Wm. Stewart, Jr., Menie, "Jean Armour."—2058—; brown and white: calved 1891. Bred by exhibitor; sire, Royal Chief (imp.)—75—; dam, Sprightly (imp.)—1210—(5509), etc.

Cow (giving milk) three years old.

1. D. McLachlan, Petite Cote, Que., "Lady Heather II," 6054; sire, Chieftain of Barcheskie, 5136; dam, Lady Heather, 5696.
2. Wm. Stewart, Jr., Menie, "White Lillie,"—1873—; white with red markings; calved September 25th, 1891. Bred by exhibitor; sire, White Prince II (imp. in dam)—808—; dam, Lady Menie,—535—, etc.
3. D. B. Johnston, Lansdowne, "Lady Graceful,"—2000—; white with red spots; calved June 18th, 1892. Bred by D. Nicol, Cataraqui; sire, Macneil, —771—; dam, Dot, —938—, etc.

Heifer, two years old.

1. Wm Stewart, Jr., Menie, "Scotch Lassie Jean,"—2230—, white with red markings; calved September 28th, 1892. Bred by exhibitor; sire, White Prince II (imp. in dam)—808—; dam, Jessie Stewart, —538—, etc.
2. D. McLachlan, Petite Cote, Que., "Lady Heather III," 6382; sire, Silver King, 5809; dam, Lady Heather, 5696.
3. J. Yuill & Sons, Carleton Place, "Meda Meadowside," —2464—; red and white; calved December 5th, 1893. Bred by exhibitors; sire, Macneil, —771—; dam, Nellie Meadowside, —2463—, etc.

Heifer, one year old.

1. Wm. Stewart, Jr., Menie, "Annie Laurie II," —2590—; white, red marks; calved October, 1893. Bred by exhibitor; sire, White Prince II (imp. in dam)—808—; dam, Jessie Stewart, —538—, etc.
2. D. McLachlan, Petite Cote, Que., "Maggie Mitchell II," 6968; sire, Silver King, 5809; dam, Maggie Mitchell, 5837.
3. Daniel Drummond, Petite Cote, Que., "Baby Ruth," 7116; sire, Silver King, 5809; dam, Mabel of Burnside, 5889.

Heifer calf, under one year.

1. D. McLachlan, Petite Cote, Que., "Flow Gently," 7485; sire, Silver King, —5809—; dam, Lady Stirling, 5683.
2. Wm. Stewart, Jr, Menie, "Moss Rose," —2605—; red and white; calved December, 1894. Bred by exhibitor; sire, Douglas of Lowdoun, —1384—; dam, Ayrshire Maggie, —1972—, etc.
2. J. Yuill & Sons, Carleton Place, "Sadie Meadowside," 2785; white and red; calved September 7th, 1895. Bred by exhibitors; sire, Tam Glen II, —1309—; dam, Lady Meadowside, —2080—, etc.

SWEEPSTAKES FOR BEST AYRSHIRE COW BY CONFORMATION; PRIZE GIVEN BY THE AYRSHIRE BREEDERS' ASSOCIATION. $25.

Daniel Drummond, Petite Cote, Que., "Nellie Osborne."

HOLSTEIN CATTLE.

Bull, three years old and upwards.

1. A. Hoover, Jr., & Son, Emery, "Emery Prince," 482.
2. C. J. Gilroy & Son, Glen Buell, "Inka Kathleen's Son," 851.
3. Wm. McClure, Norval, "Siepkjes Mink Mercedes," 31.

Bull, two years old.

1. G. W. Clemons, St. George, "Netherland Consul," 530.
2. Wm. McClure, Norval, "Mink Mercedes, Aaggie, 405.

Bull, one year old.

1. A. Hoover, Jr., & Son, Emery, "Barton Witzyde," 650.

Bull calf, under one year.

1. A. & G. Rice, Currie's Crossing, "Sir Paul de Kal Clothilda."
2. G. W. Clemons, St. George, "White Prince," 873.
3. G. W. Clemons, St. George, "Sir Pieterge, Jr., Mechthilda," 860.

Cow (giving milk) four years old and over.

1. C. J. Gilroy & Son, Glen Buell, "Carman Sylvia," 306.
2. A. & G. Rice, Currie's Crossing, "Eunice Clay," 1155.
3. Wm. McClure, Norval, "Aaggie Ada 5th," 380.

Cow (giving milk) three years old.

1. A. Hoover, Jr. & Son, Emery, "Emery Beauty," 508.
2. A. & G. Rice, Currie's Crossing, "Lady Pieterge," 659.

Heifer, two years old.

1. G. W. Clemons, St. George, "Cornelia Artis," 865.
2. A. Hoover, Jr. & Son, Emery, "Edgely Trena," 1074.
3. A. & G. Rice, Currie's Crossing, "Daisy Jewel 2nd," 991.

Heifer, one year old.

1. Wm. McClure, Norval, "Belle of Norval," 1403.
2. G. W. Clemons, St. George, "Mandamin's Daisy Barrington," 1356.
3. Wm. McClure, Norval, "Alice Helena of Peel," 1069.

Heifer calf, under one year,

1. G. W. Clemons, St. George, "Artis Mercedes Margaret," 1359.
2. G. W. Clemons, St. George, "Queen de Kols Josephine Mechthilda," 1357.
3. C. J. Gilroy & Son, Glen Buell, "Inka Sylvia, 1321.

GUERNSEY CATTLE.

Bull, three years old and upwards.

Isaac Holland, Culloden, "May's Roseberry," 3423.

Bull, two years old.

Isaac Holland, Culloden, "Dandy of Oxford," 3424.

Bull, one year old.

W. H. & C. H. McNish, Lyn, "Jesse James."

Bull calf, under one year.

W. H. & C. H. McNish, Lyn, "Tommy," 3921.

Cow (giving milk) four years old and over.

W. H. & C. H. McNish, Lyn, "Ada of Eastview," 4374.

Cow (giving milk) three years old.

W. H. & C. H. McNish, Lyn, "Balinda of Eastview," 6289.

Heifer, two years old.

W. H. and C. H. McNish, Lyn, "Linny of Eastview," 7523.

Heifer, one year old.

W. H. & C. H. McNish, Lyn, "Niphetos 2nd"; sire, Florist, 2257; dam, Niphetos, 4602.

Heifer calf, under one year.

1. W. H. & C. H. McNish, Lyn, Linda II of Eastview,—8213.

BEEF BREEDS, EITHER SHORTHORN, HEREFORDS, POLLED ANGUS, GALLOWAY, DEVONS OR GRADES.

Grade Cow (giving milk), three years old and over.

1. W. H. & C. H. McNish, Lyn, "Little Girl."
2. D. McLachlan, Petite Cote, Que., "Jess."

SWEEPSTAKES FOR COW OF ANY KIND (BY SCALE).

1. C. J. Gilroy & Son, Glen Buell.

DAIRY PRODUCTS.

CHEESE.

Four, factory made (colored), not less than 40 lbs. each; 2 to be manufactured from 15th to 30th of July, 1895, both days inclusive.

1. Dargavel and Murphy, Elgin.
2. John C. Stafford, Lansdowne.
3. H. A. McDonald, Battersea.
4. Robert Cuddie, Woodstock.

Four, factory made (white), not less than 40 lbs. each; 2 to be manufactured from 15th to 30th of July, 1895, both days inclusive.

1. Wm. W. Stafford, Lansdowne.
2. James L. Thomson, Belfast.
3. John C. Stafford, Lansdowne.
4. John B. Muir, Avonbank.

Three, factory made (colored), not less than 40 lbs. each; made on any day between the 15th and 30th of August, 1895, both days inclusive.

1. James A. Gray, Atwood.
2. John Morrison, Newry.
3. T. B. Seller, Laurel.
4. A. D. Perry, Harrowsmith.

Three, factory made (white), not less than 40 lbs. each; made on any day between the 15th and 30th of August, 1895, both days inclusive.

1. John B. Muir, Avonbank.
2. John Morrison, Newry.
3. Mrs. Drewry, Godolphin.
4. Jas. A. Gray, Atwood.

Three Truckle cheeses, not exceeding 10 lbs.

1. Robert Cuddie, Woodstock.

Sweepstakes for one cheese—Prize given by Eastern Dairymen's Association—$25 for best colored factory cheese, and $25 for best white factory cheese.

1. Robert Cuddie, Woodstock, colored cheese.
2. John B. Muir, Avonbank, white cheese.

Special prizes by Messrs. Gladd & Co., Copenhagen, Denmark.

For best three colored cheeses, made with Gladd's Rennet and colored with Gladd's Annatto.—Gold Medal.

W. R. Kaiser, Lansdowne.

For best three white cheeses, made with Gladd's Rennet.—Silver Medal.

Jas. A. Gray, Atwood.

BUTTER.

Three firkins, not less than 50 lbs. each, made at a butter factory or creamery.

1. C. Johnson & Son, Athens.
2. Chas. Snediker, Haysville.
3. Isaac Wenger, Ayton.
4. W. C. Binion, Iroquois.

Seventy-five lbs. of creamery, in pound rolls or prints.

1. C. Johnson & Son, Athens.
2. W. C. Binion, Iroquois,
3. Chas. Snediker, Haysville.
4. Isaac Wenger, Ayton.

Sixty lbs. of creamery, in packages that contain not less than 10 lbs. each.

1. C. Johnson & Son, Athens.
2. Isaac Wenger, Ayton.
3. W. C. Binion, Iroquois.
4. Chas. Snediker, Haysville.

Three firkins, not less than 30 lbs. each, made at any farm dairy.

1. W. C. Shearer, Bright.
2. A. D. Delong, Elgin.
3. Samuel Hunter, Rockton.
4. Neil Sangster, Ormstown, Que.

Two firkins, crocks or tubs, not less than 20 lbs. each, made at any farm dairy.

1. W. C. Shearer, Bright.
2. Samuel Hunter, Rockton.
3. Mrs. B. McNamee, Sand Bay.

Three crocks or tubs of 10 lbs. each, made at any farm dairy.

1. A. D. Delong, Elgin.
2. Mrs. Allen Smith, Westbrook.
3. Samuel Hunter, Rockton.

Basket of butter, 1 lb. print or rolls, not less than 10 lbs., made at any farm dairy.

1. Samuel Hunter, Rockton.
2. W. C. Shearer, Bright.
3. Mrs. Allen Smith, Westbrook.
4. Neil Sangster, Ormstown, Que.

Sweepstakes contributed by the Creamery Association.

For the best lot of butter in firkins or crocks.—$15.

C. Johnson & Son, Athens.

For the best lot of butter in prints or rolls.—$15.

C. Johnson & Son, Athens.

DAIRY UTENSILS.

Creamery outfit, steam, with all appliances in operation.

1. D. Derbyshire & Co., Brockville.

Cream separator (hand) with all appliances.

1. D. Derbyshire & Co., Brockville.
2. Chas. D. Chown, Kingston.

Cheese-factory outfit ready for operation.

1. D. Derbyshire & Co., Brockville.
2. Chas. D. Chown, Kingston.

Cheese boxes, six, for shipping purposes.

1. D. Derbyshire & Co., Brockville.
2. H. A. McDonald, Battersea.
3. John C. Stafford, Lansdowne.

Butter tubs, assortment, for shipping purposes.

1. D. Derbyshire & Co., Brockville.
2. Chas. D. Chown, Kingston.

Churn for dairy farm.

1. D. Derbyshire & Co., Brockville.
2. Chas. D. Chown, Kingston.

Butter worker for farm dairy.

1. D. Derbyshire & Co., Brockville.

Small butter packages, for holding from 10 to 20 lbs.

1. D. Derbyshire & Co., Brockville.
2. Chas. D. Chown, Kingston.

Butter packages for holding pound prints.

1. D. Derbyshire & Co., Brockville.
2. Chas. D. Chown, Kingston.

REPORT OF JUDGE AT PROVINCIAL DAIRY SHOW, HELD AT GANANOQUE, 1895.

——	Name of cow.	Owner.	Points scored.	Total lb. milk.	Average per cent. fat.	Total lb. fat.	Average per cent. solids not fat.	Total lb. s. n. fat.
Jersey cow 4 yrs. old and over:								
1st	Gipsy	Mrs. E. M. Jones	128.50	52.75	4.53	2.436	9.41	4.957
2nd	Satanella	" "	126.72	59.00	4.10	2.358	8.75	5.140
3rd	Silver Delle	" "	120.81	51.00	4.80	2.412	9.24	4.643
4th	Lulu Delle	" "	110.25	45.75	4.86	2.241	9.22	4.220
Ayrshire cow 4 yrs. old and over:								
1st	Maggie Mitchell	D. McLachlan	198.87	93.25	3.50	3.292	9.14	8.519
2nd	Nellie Osborne	D. Drummond	179.36	92.50	2.90	2.704	9.09	8.444
3rd	Jean Armour	Wm. Stewart, jr	169 27	82.75	3.30	2.756	9.51	7.850
4th	Spotted Maid	Jos. Yuill & Son	138.97	59.75	3.46	1.956	9.26	5.524
5th	Rose of Bethal	Wm. Stewart, jr	127.82	57.50	4.06	2.323	9.24	5.315
Ayrshire cow 3 yrs. old:								
1st	Lady Heather	D. McLachlan	141.40	68.00	3.33	2.247	9.37	6.340
2nd	White Lillie	Wm. Stewart, jr	131.13	62.00	3.63	2.302	9.26	5.772
3rd	Lady Graceful	D. B. Johnston	103.80	46.00	3.66	1.675	9 37	4.300
Holstein cow 4 yrs. old and over:								
1st	Carmen Sylvia	C. J. Gilroy & Son	261.86	138.00	2 80	3.827	8.82	12.030
2nd	Eunice Clay	A. & G. Rice	205.70	103.00	3 13	3.217	8.23	8.440
3rd	Aaggie Ida	Wm. McClure	204.52	99 50	3 20	3.226	9.19	9.150
4th	Lady Dewdrop	A. & G. Rice	196 14	96.75	3.10	2.984	8.44	8 152
5th	Oxford Jewel	C. J. Gilroy & Son	192.95	96.75	3.06	2.960	8.69	8.399
6th	Josie Lass	Wm. McClure	184.83	99.25	2.60	2.606	9.44	9.366
Holstein cow 3 yrs. old:								
1st	Emery Beauty	A. Hoover & Son	175.13	87.85	3.06	2.666	8.83	7.691
2nd	Lady Pieterge	A. & G. Rice	130.74	57.50	3.13	1.807	8.81	5.025
Guernsey cow 4 yrs. old and over:								
1st	Ada of Eastview	W. H. & C. H. McNish	137.91	59.75	4.33	2.581	9.74	5.810
Guernsey cow 3 yrs. old:								
1st	Belinda of Eastview	W. H. & C. H. McNish	127.73	51.50	4.44	2.279	9.84	5.062
Grade cows 3 yrs. old and over:								
1st	Grade	W. H. & C. H McNish	186.40	82.25	3.93	3.230	9.06	7.462
2nd	Jess	D. McLachlan	131.81	57.25	3.76	2.250	8.95	5.089

Sweepstakes—Carmen Sylvia, owned by Gilroy & Son; score, 261.86.

H. H. Dean, Judge.

SPRING STALLION SHOW AND CANADIAN HORSE SHOW.

THOROUGHBRED.

STALLIONS, FOALED PREVIOUS TO JANUARY 1ST, 1892.

1. Wm. Hendrie, Hamilton, Ont., Strathspey (imp), bay, foaled 1886; sire, Glenelg; dam, La Polka, by Lexington, etc.
2. Dr. F. J. Gallanough, Thornhill, Ont., Monotony, bay, with star on forehead; foaled in 1890. Bred by Capt. Manning, Virginia, U.S.; sire, Monticello; dam, mare, by Romney, etc.
3. W. J. Paterson, Owen Sound, Ont., Stereoscope (imp.) (Vol. XVI. E.S.B.); chestnut; foaled in 1885; imported in April, 1892, by Haines & Paterson, Owen Sound, Ont.; sire, Hagioscope; dam, Syren, by Cremorne, etc.
4. Quinn Bros., Brampton, Ont.; Wiley Buckles, bay, foaled in 1885. Bred by W. Buckles, Champagne, Ill., U.S.; sire, London; dam, Lizzie, by Uncle Vic, etc.
5. Graham Bros., Claremont, Ont., Montana (imp), chestnut; white star on forehead, foaled in 1886; sire, Muncaster; dam, Zingara, by Albert Victor, etc.

STALLIONS, FOALED SUBSEQUENT TO AND ON JANUARY 1ST, 1892.

1. Thomas Irving, Winchester, Ont., St. James; bay; foaled in 1892; bred by James Rawlings, Thirsk, Eng.; imported by exhibitor; sire, Downy Bird; dam by Duc de Beaufort, etc.
2. A. Frank & Son, The Grange, Ont, Button; brown; foaled September 14th, 1893; sire, Marquis (son of Terror); dam, Jenny Lind, by Terror, etc.

SWEEPSTAKES FOR THE BEST THOROUGHBRED STALLION OF ANY AGE, QUALIFIED TO IMPROVE THE BREED OF SADDLE HORSES AND HUNTERS, $20.

W. J. Paterson, Owen Sound, Ont., "Stereoscope," see above.

CARRIAGE OR COACH.

STALLIONS, FOALED PREVIOUS TO JANUARY 1ST, 1892.

1. James McCartney, Thamesford, Ont., Graf Bremer: brown; foaled in 1889.
2. Milton German Coach Horse Co., Milton, Ont., Picador (imp.), (Ger.), 1611, (Am.) 791; dark bay; foaled May, 1890; bred by R. Kuckens, Ollinbei Berne, Germany, imported by exhibitors; sire, Ardo, 1,000 G.: dam, Piquedame, 944 G, by Emigrant, etc.
3. Thomas Irving, Winchester, Ont, Bon Ton; bay; foaled in 1891; sire, Favorite 581; dam, by George Osbalderton, etc.
4. E. W. Ware, Hamilton, Ont., Khiva (imp.). from France, 1124; brown; foaled in 1889; bred by M. Poittevin, France; sire, Government stallion, Page; dam, Lisette, by Jarnac, etc.
5. Harry Webb, Toronto, Ont., Reno McGregor; chestnut; foaled in 1890.

STALLIONS, FOALED SUBSEQUENT TO AND ON JANUARY 1ST, 1892.

1. J. L. Reid, Meadowvale, Ont., Salesman Boy: bay; foaled in 1892; sire, Shining Light; dam, Fuschia, etc.
2. Edwin Taylor, Toronto, Ont., Abdallah Stanton; bay; foaled in 1892; sire, Belmont Star; dam, Dolly Stanton, by General Stanton, etc.

SWEEPSTAKES FOR BEST COACH STALLION OF ANY AGE; PRIZE GIVEN BY AGRICULTURE AND ARTS ASSOCIATION. $20.

James McCartney, Thamesford, Ont., "Graf Bremer," see above.

STANDARD BRED ROADSTER.

STALLIONS, FOALED PREVIOUS TO JANUARY 1ST, 1892.

1. Learn & Miller, Brampton, Ont., Gold Ring, 12899; chestnut; foaled in 1884.
2. H. E. McCully, Toronto, Ont, Altoneer; bay; foaled in 1891. Bred by exhibitor; sire, Sphinx; dam, Pilomia, by Pilot Wilkes, etc.
3. A. Proctor, Aurora, Ont., Bourbonnais, 11901; chestnut; foaled in 1888. Owned by W. R. Proctor, Richmond Hill, Ont.; sire, Bourbon Wilkes, 2345; dam, Lady Almonte, etc.
4. Harry Webb, Toronto, Ont., Goldband, 0200; dark bay; foaled in 1890. Bred by Santford Bronnenburg, Chesterfield, Ind., U.S; sire, Tasco, 16964: dam, Topsy (pacer), by Beecher, etc.
5. John Clark, Toronto, Conn's Harry Wilkes; bay; star on face; white heels; foaled in 1875. Bred by C. C. Sharpe, Lexington, Ky., U.S; sire, George Wilkes, 519; dam, Belle Rice, by Whitehall, etc.
6. G. S Fuller, Brampton, Ont., Harry Lexington, 15910; bay; foaled in 1889; sire, Corinthian, 2413; dam, Gabrielle, by Gambetta, 1172, etc.

STALLIONS, FOALED SUBSEQUENT TO AND ON JANUARY 1ST, 1892.

1. J. MacKerrow, Toronto, Ont., Shekinah, 23868; bay; foaled in 1892. Bred by G. Valensin, Pleasanton, Cal., U.S.
2. George Jackson & Son, Downsview, Ont., Sylviego, 24875; bay; foaled April 1st, 1992. Bred by McFarren & Clancy, Alta Vista, Ky., U.S.; sire, Egotist, 5018; dam, Sylvia, by Stranger, 3030, etc.
3. Harry Webb, Toronto, Ont., Baron Brown; black, foaled in 1892; sire, Bermuda 5874; dam, Maud X, by Mambrino Pet, jr.
4. S. B. Kaiser, Cookstown, Ont., Penville Boy, 24885 black, foaled 1892. Bred by Wm. Bruce, Penville, Ont.

SWEEPSTAKES FOR BEST STANDARD BRED ROADSTER STALLION OF ANY AGE, GIVEN BY THE AGRICULTURE AND ARTS ASSOCIATION, $20.

Learn & Miller, Brampton, "Gold Ring." See above.

HACKNEY.

STALLIONS FOALED PREVIOUS TO JANUARY 1ST, 1892.

Over 15 hands 2 inches.

1. Robert Beith & Co., Bowmanville, Ont., Ottawa (imp.) —2—; chestnut, foaled in 1890. Bred by Wm. Martin, Scoreby Grange, Yorkshire, Eng., imported by Wm. Kerr, Raeburn, Man.; sire, Lord Derwent II. (1034); dam, Mayflower (imp.) —2— (767), by Highflyer (1648), etc.
2. Robert Beith & Co., Bowmanville, Ont., Jubilee Chief (imp.) —1— (2122); black, four white feet, foaled in 1887. Bred by Wm. Martin, Scoreby Grange, Yorkshire, Eng., imported in 1890 by Robert Kerr, Raeburn, Man.; sire, Pilot (1323); dam, Queen of the Forest (297), by Fireaway (249).
3. A. G. Ramsay, Hamilton, Ont., Courier (imp.) —26— (1751); bay, foaled in 1887. Bred by C. E. Cooke, Litcham, Norfolk, Eng., imported in July, 1890, by Dr. W. Seward Webb, Shelbourne, Vt., U.S.; sire, Canvasser (114); dam, May Day (479), by Cannon Ball (113).
4. H. N. Crossley, Toronto, Ont, Fireworks (imp.) —16— (6302); brown, foaled in 1890. Bred by James Scott, Clay Field, Pocklington, Yorkshire, Eng., imported in 1893; sire, Wildfire (1224); dam, Pretty Polly (4574), by [Superior 1410], etc.
5. Graham Bros., Claremont, Ont., Dundrennan (imp.) —17— (2959); chestnut, blaze on face, foaled in 1888. Bred by D. Maitland, Comptone, Kircudbright, Scotland, imported in 1891 by exhibitor; Darrington II. (946); dam, [Cigarette 210, F. S.], etc.

STALLIONS FOALED PREVIOUS TO JANUARY 1ST, 1892.

Over 15 hands and up to 15 hands 2 inches.

1. Graham Bros., Claremont, Ont., Kilnwick Fireaway (imp.) —5— (6398); bay, right heel white, foaled in 1890. Bred by J. T. Elgey, Kilnwick, Yorkshire, Eng., imported by Thos. Irving, Winchester, Ont.; sire, Lord Swanland (1834); dam, Trip (6251), by [Tripaway 2296], etc.
2. A. G. Bowker, Woodstock, Ont, The Shah (imp.) —47— (2678; black, foaled in 1886. Bred by James Coke, Beetley Hall, Eng., imported by exhibitor; sire, Adonis (12); dam, Black Bess (32); by Perfection (541), etc.
3. Geo. H. Hastings, Deer Park, Ont., Black Prince —50—; dark brown, foaled in 1891. Bred by exhibitor sire, Young Nobleman (imp.) —30— (2328; dam, Betty (34), etc.

STALLIONS FOALED PREVIOUS TO JANUARY 1ST, 1892.

15 hands and under.

1. Geo. H. Hastings, Deer Park, Ont., Black Nobleman —18—; dark brown, foaled in June, 1891. Bred by exhibitor; sire, Young Nobleman (imp.) —30— (3328); dam, Norfolk Duchess (imp.) —12— (2355), by Fireaway (267).
2. Geo. H. Hastings, Deer Park, Ont., Little Duke; black brown, one hind foot white, foaled in 1891. Bred by exhibitor; sire, Young Nobleman (imp.) —30— (3328); dam, Kate, by Fireaway, etc,

STALLIONS FOALED IN 1892.

1. Robert Beith & Co., Bowmanville, Ont., Banquo —3—; dark bay, star on face, four white feet, foaled in 1892. Bred by exhibitor; sire, Jubilee Chief (imp.) —1— (2122); dam, Mona's Queen (imp.) —4— (5887), by Lord Derwent II. (1034), etc.
2. Robert Beith & Co., Bowmanville, Ont., Lord Rosebery II. —4—; brown, off fore foot white, foaled in 1892. Bred by exhibitor; sire, Jubilee Chief (imp.) —1— (2212); dam, Florence (imp.) —3— (661), by Randolph (1123), etc.
3. Robert Dack, Toronto, Ont., County Council (imp.) —48— (5153); chestnut, off hind foot white, foaled in 1892. Bred by Robert Dack, Flegg Burgh, Great Yarmouth, Eng., imported in 1894; sire, Cassius (2397); dam [Red Eyes 8411], by Young Confidence (1237), etc.

MARES THREE YEARS OLD AND UNDER.

1. Robert Beith & Co., Bowmanville, Ont., Jessica —25— ; brown, star on forehead, four white feet, foaled in April, 1894. Bred by exhibitor ; sire, Jubilee Chief (imp.) —1—(2122) ; dam, Mona's Queen (imp.) —4— (5887), by Lord Derwent II. (1034), etc.
2. H. N. Crossley, Rosseau, Ont., Althorpe Duchess (imp.) —21— (6358) ; bay, four black legs, foaled in 1892. Bred by John T. Brown, Doncaster, Yorkshire, Eng., imported in 1894 ; sire, Caxton (2398) ; dam, Bird in Hand (1018), by Pride (1324), etc.
3. John Holderness, Toronto, Ont., Cherry Ripe —8— ; bay, foaled in May, 1892. Bred by Graham Bros., Claremont, Ont. ; sire, Seaguli (imp.) —8 - (2261) ; dam, Dandy No. 1, by Black Diamond, etc.
4. H. N Crossley Rosseau, Ont., Althorpe Countess (imp.) —20— (6357) ; roan, foaled in 1892. Bred by John T. Browne, Doncaster, Yorkshire, Eng., imported in 1894 ; sire, Enthorpe Performer (2973) ; dam, Fanny, (111), by [Phenomenon], etc.

SWEEPSTAKES FOR BEST HACKNEY, ANY AGE, GIVEN BY THE HACKNEY HORSE SOCIETY, $30.

Robert Beith & Co., Bowmanville, Ont., "Banquo." See above.

SHIRE.

STALLIONS FOALED PREVIOUS TO JANUARY 1ST, 1892.

1. Morris, Stone & Wellington, Welland, Ont., Pride of Hatfield (imp.) [256] ; bay, stripe on face, three white legs, foaled in 1890. Bred by G. Smales, Gowdall, Yorkshire, Eng., imported in 1894 ; sire, Lincolnshire Lad II. (1365) ; dam, Flower, by Gay Lad, etc.
2. H. N. Crossley, Rosseau, Ont., Bravo II. (imp.) [250] (12836) ; bay, foaled in 1888. Bred by R. N. Sutton, Nelthorpe, Scawby Hall, Lincolnshire, Eng., imported in 1893 ; sire, Will-o-the-Wisp (6574) ; dam, Boadicea by True Briton (2384).
3. J. M. Gardhouse, Highfield, Ont., Garfield II. (imp.) [138] (2786) ; bay, three white heels and face, foaled in 1881. Bred by T. Gornell, Preston, England ; sire, What's Wanted (2332) ; dam, Darby, by Paragon, etc.
4. Morris, Stone & Wellington, Welland, Ont., Prince Charles [196] ; stripe on face, near front foot and hind feet white, foaled in 1888. Bred by exhibitors ; sire, Carbon (3523) ; dam, Lancashire Lass, by Honest Tom, etc.
5. John Semple, Tottenham, Ont., C. A. (imp.) [220] ; bay, stripe on face, foaled in 1889. Bred by Thos. Cook, England ; sire, Northern King (2635) ; dam, Nellie, by Marauder.

STALLIONS FOALED IN 1892.

1. J. M. Gardhouse, Highfield, Ont., Duke of Blagdon (imp.) [257] ; bay, dark points, foaled 1892. Bred by Clement Keevil, New Malden, England, imported by exhibitor ; sire, Blagdon Lincoln (12797) ; dam, Blagdon Brunette, by Lincolnshire Lad, etc.
2. Morris, Stone & Wellington, Welland, Ont., Frederick William (246) ; bay, star on face, off fore foot and hind legs white, foaled in 1892. Bred by exhibitors ; sire, Prince Charles [196] ; dam, Elsie Morin (imp), by Welton Tom (3396), etc.

SWEEPSTAKES FOR BEST SHIRE STALLION, ANY AGE, PRINCE OF WALES PRIZE, GIVEN BY THE AGRICULTURE AND ARTS ASSOCIATION, $40.

Morris, Stone & Wellington, Welland, Ont.

SECOND SWEEPSTAKES, FOR BEST SHIRE STALLION OF ANY AGE, GIVEN BY THE SHIRE HORSE ASSOCIATION, $20.

H. N. Crossley, Rosseau, Ont.

CLYDESDALE.

STALLIONS FOALED PREVIOUS TO JANUARY 1ST, 1892.

1. Graham Bros., Claremont, Ont., Esquire of Park (imp.) [2178] 6808 (7699) ; brown, star on face, hind feet white, foaled in May, 1888. Bred by Wm. Currie, Scotland ; sire, Laird Darnley (3748) ; dam, Lily (7144), by Stanley (3354), etc.
2. Robert Davies, Toronto, Ont., Prince of Quality [2173] ; black, ratch on face, hind legs white. Bred by Robert Holloway, Alexis, Ill., U.S. ; sire, Cedric (imp.) 929 (1087) ; dam, Jennie Roy 2245, etc.
3. Vance & Eby, Shakespeare, Ont., Golden Crown (imp.) [1530] ; bay, stripe on face, nigh fore leg and hind legs white, foaled June 27th, 1889. Bred by Wm. Hood, Chapelton, Scotland, imported by D. & O. Sorby, Guelph, Ont. ; sire, Silver Twist (5348) ; dam, Lady Alison (imp.) [1459], by Belted Knight (1305), etc.
4. John Davidson, Ashburn, Ont., Tofty (imp) [2123] (9452) ; bay, star on face, legs black, foaled May, 1890. Bred by S. Campbell, jr., Tofthills, Scotland, imported 1891 by John Isaac, Markham, Ont. ; sire, Botanist (4872) ; dam, Belinda (7048), by Grand Turk (1148), etc.
5. John Vipond, Brooklin, Ont., Erskine Style [2121] ; bay, ratch on face and off hind pastern white, foaled in May, 1891. Bred by exhibitor ; sire, Erskine (imp.) [1652] (4986) ; dam, Brooklin Metal (imp.) [1877] (11165) by Farmer's Boy (2097), etc.

6. T. W. Evans, Yelverton, Ont., Craichmore Darnley (imp) [2127] (5667); bay, white face, four white legs, foaled in April, 1886. Bred by Wm. McMaster, Scotland, imported by exhibitor; sire, Darnley (222); dam, Flora (843), by Druid (1120), etc.
7. T. W. Evans, Yelverton, Ont., Umvar (imp.) [2129] (9457); bay, ratch on face, hind pasterns white, foaled in 1890. Bred by A. Muirhead, Scotland, imported by exhibitor; sire, Lord Ailsa (5974); dam, Young Maggie, by Topman (886), etc.
8. Wm. Taylor, Cannington, Ont., Balgownie (imp.) [2033] (9116); brown, white on face, hind feet white, foaled May, 1890. Bred by A. Cruickshank, Sittyton, Scotland, imported in 1891 by Davidson & Sorby, Guelph, Ont.; sire, Gallant McCamon (6766); dam, Autumn Bud (7153), by Lord Erskine (1744), etc.

STALLIONS FOALED IN 1891.

1. Samuel McArthur, Oro Station, Ont., Grand National [1951]; bay, white face, four feet and nigh hind leg white, off hind leg partly white; foaled in June, 1892. Bred by Alex. Cameron. Ashburn, Ont.; sire, Tannahill (imp.) [1205] (4745); dam, Mary's Pet (imp.) [1643] by Cairnbogie Stamp (4274), etc.
2. John Davidson, Ashburn, Ont., Lewie [2177] 7294; bay, hind legs white to hocks, off front foot white; foaled May 5th, 1892 Bred by exhibitor; sire, Lewie Gordon (imp.) [1602] 5530, (7918); dam, Highland Maid Sixth [1823] 2381, by Boydston Boy (imp.) [216] 1872 (111), etc.
3. S. J. Prouse, Ingersoll, Ont., Roslin (imp.) [2124] (9839); bay, white ratch on face, little white on near fore foot and off hind leg; foaled May, 1892. Bred by Wm. Mackie, Colston, Scotland; imported by exhibitor; sire, Rosedall (8194); dam, Mary of Finnich (6453) by Pride of Endrick (3069), etc.

STALLIONS FOALED SUBSEQUENT TO AND ON JANUARY 1ST, 1893.

1. Graham Bros., Claremont, Ont, Symmetry II. [2091] 7811; bay, stripe on face, hind legs and nigh fore pastern white; foaled April 16th, 1893. Bred by exhibitors; sire, Symmetry (imp.) [1713], (9413); dam, Nelly (imp.) [970], by Laird of Bute (4490), etc.

SWEEPSTAKES FOR BEST CLYDESDALE STALLION OF ANY AGE, GIVEN BY AGRICULTURE AND ARTS ASSOCIATION, GOLD MEDAL.

Graham Bros., Claremont, Ont., "Esquire of Park." See above.

CANADIAN BRED CLYDESDALES.

STALLIONS FOALED PREVIOUS TO JANUARY, 1892.

1. P. Kelly, Orillia, Ont., Pride of Dollar [962]; bay, white stripe on face, nigh hind foot white; foaled May 6th, 1887. Bred by Wm. Cox, Thornhill, Ont.; sire, Pride of Perth (imp.) [282] (2336); dam, Sally of Thornhill [328] by Sir William Wallace (imp.) [123] 1, etc.
2. Geo. Gray, Clarke, Ont., Royal George [2169]; brown, ratch on face, hind feet white; foaled in 1891. Bred by exhibitor; sire, Candlemas (imp.) [815] (5614); dam, Rosebud [2103], by Peer of the Realm (imp.) [370] (3882), etc.
3. Job White, Ashburn, Ont., Ashburn Hero [2093]; bay, ratch on face, white hind feet; foaled August 15th, 1891. Bred by exhibitor; sire, Tannahill (imp.) [1205] (4745); dam, Jesse of Brooklin [1641] by General Duke (imp) [6] 1721, (1663), etc.

STALLIONS FOALED IN 1892.

1. Wm. Foster & Son, Humber, Ont., Addison [2158]; bay, stripe on face, inside of fore foot white; foaled July 26th, 1892. Bred by exhibitor; sire, Macneilage (imp.) [1117] (2792); dam, Lill [2171], by Prince of Kilblain (imp.) [533] (5268), etc.

STALLIONS FOALED SUBSEQUENT TO AND ON JANUARY 1ST, 1893.

1. W. J. Howard, Dollar, Ont., City Boy [2174]; bay, stripe on face; white hind feet; foaled May 27th, 1893. Bred by exhibitor; sire, The Granite City (im.) [709] (5397); dam, Spunk [2199], by Lord Salisbury (imp.) [246] 428 (2977), etc.

SWEEPSTAKES FOR BEST CANADIAN BRED CLYDESDALE STALLION, ANY AGE, GIVEN BY INDUSTRIAL EXHIBITION ASSOCIATION, GOLD MEDAL.

P. Kelly, Orillia, Ont., "Pride of Dollar" [962]. See above.

HORSES AND CATTLE AT THE INDUSTRIAL EXHIBITION AT TORONTO.

HORSES.

THOROUGHBREDS.

Stallion, Four Years Old and Upwards.

1. T. H. Hassard, V.S., Millbrook, Tyrone, Vol V.; s. Mortimer; d. Gyptis.
2. Brown & Gilkinson, Brampton, Woodburn; s. King Alfonso; d. Molly Wood.
3. W. J. Thompson, Orkney, King Bob; s. King Ban; d. Bobadilla.

Stallion, Four Years old and upwards, best Calculated to Produce Hunters and Saddle Horses.

1. Quinn Bros., Brampton, Wiley Buckles, 449; s. London; d. Lizzie Vic.
2. Dr. J. F. Gallanough, Thornhill, Monotony; s. Monticello; d. Sister of Romance.
3. Thomas Meagher, Toronto, Gamble Orr; s. My Lud; d. Bee Bird.

Stallion, Three Years Old.

1. Thomas Irving, Winchester, St. James; s. Downy Bird; d. Flossie.
2. A. Frank & Sons, The Grange, Button; s. Marquis; d. Jenny Lind.

Stallion, Two Years Old.

1. John Dyment, Orkney, Disturbance III.; s. Morison, d. Katrine.
2. John Dyment, Orkney, Solid Silver II; s. Vibeate; d. Lady Uxbridge.

Yearling Colt—Entire.

1. Robert Davies, Toronto, ———; s. Dandy Dinmont; d. Thistle.
2. A. Frank & Son, The Grange, Terrymont, 109; s. Dandy Dinmont; d. Jenny Lind.
3. John Dymont, Orkney, Highcourt; s. Courtown; d. Combine.

Stallion of any Age.

T. H. Hassard, V.S., Millbrook, Ont., "Tyrone." See above.

Mare or Gelding, Four Years Old and Upwards.

1. Robert Davies, Toronto, Thistle; s. King Ernest; d. Invermore.
2. John Dyment, Orkney, Lucy Lightfoot; s. Big Sandy; d. Nettie.
3. Geo. Kennedy, Oakville, Addie B.; s. Voltigeur; d. Pet.

Filly, Three Years Old.

1. Robert Davies, Toronto, Fair Flora; s. Florentine; d. Dumblane.
2. John Dyment, Orkney, Barbara; s. King Bob; d. Lucy Lightfoot.
3. John Dyment, Orkney, Cassie; s. Billetto; d. Mamie Long.

Filly, Two Years Old.

1. A. E. Dyment, Orkney, Terra Nora; s. Cymbal; d. Supplice.
2. Robert Davies, Toronto, Music V.; s. Autocrat; d. Discord.
3. A. Frank & Son, The Grange, Caledon Maid, Vol. V.; s. Marquis; d. Lady Harper.

Yearling Filly or Gelding.

1. Robert Davies, Toronto, ———; s. Parisian; d. Buckle.
2. Geo. Kennedy, Oakville, Tone K.; s. Parisian; d. Addie B.
3. John Dyment, Orkney, Reformation; s. Dandy Dinmont; d. ——.

Brood Mare, with Foal by Her Side.

1. Robert Davies, Toronto, Brilliance; s. Kisbar; d. Cape Diamond.
2. Robert Davies, Toronto, Andante; s. Master Kildon; d. Mirobolante.
3. A. Frank & Sons, The Grange, Jenny Lind, Vol. VI.; s. Terror; d. Lady Harper.

Foal of 1895.

1. Robert Davies, Toronto, ——; s. Admiral; d. Thistle.
2. Robert Davies, Toronto, ——; s. Oxlip; d. Brilliance.
3. Fred. Webster, Toronto, Easter Boy, Vol. V.; s. Ravillo; d. Mamie Long.

Robert Davies, Toronto, "Thistle." See above.

ROADSTERS.

Stallion, Four Years Old and Upwards, not Less than 15½ Hands.

1. George W. Langs, St. Thomas, Ont.
2. John McBride, Newtonbrook, Tony Wilkes; s. Hornet Wilkes; d. Lizzie Douglas.
3. J. Cherry, Toronto, Wilmot; s. Wilton; d. Maggor Patchen.
4. Harry Webb, Toronto, Reno McGregor; s. Black Hawk McGregor; d. Senora.

Stallion, Three Years Old.

1. Wm. Hoar, Myrtle, Victor Wilkes.
2. E. Taylor, Toronto, Abdallah; s. Stanton; d. by General Stanton.
3. J. J. & S. Kissock, Oro Station, Regulator; s Little Hamilton, 23124; d. Maud.

Stallion, Two Years Old.

1. Dr. C. H. Brereton, Bethany, Aurelian, 633; s. Hermit, 3923; d. Maud.
2. Dent Dalton, Delhi, Charley Duval; s. Shadeland Duval; d. Daisy Patchen.

Yearling Colt—Entire.

1. J. B. Cowieson, Queensville, Victor.

Stallion of any Age.

Geo. W. Langs, St. Thomas, Ont.

Gelding or Filly, Three Years Old.

1. J. W. Paterson, Denfield, Lorna Sprague.
2. Joseph Lawson, Brampton, Maud; s. Crown Prince; d. Bessie.
3. Eli Dolson, Alloa, Bonnie; s. ——; d. ——.
4. James Talbot, Everton, Nettie; s. Loraine; d. ——.

Gelding or Filly, Two Years Old.

1. H. Cargill & Son, Cargill, Julia; s. General Jackson; d. Daisy.
2. W. G. Rudd, Toronto, Simmie; s. Sim Watson; d. ——.
3. Jacob Pierson, Deerhurst, ——; s. Little Hamilton; d. by Whistle Jacket.
4. Thomas A. Crow, Toronto, Maud W.; s. Sim Watson; d. Clarion Chief.

Yearling—Gelding or Filly.

1. H. G. Boag, Bella B.; s. Deacon, 173801; d. Minnie.
2. J. J. & S. Kissock, Oro Station, Nellie K.; s. Little Hamilton; d. Nelly B.
3. W. J. Harris, Woodbridge, Maturity; s. Regent; d. Lady Bonner.
4. Alex. Holmes, Beachville, Twilight; s. Pillarist; d. ——.

Brood Mare, with Foal by Her Side, not Less than 15½ Hands

1. Dent Dalton, Delhi, Daisy Patchen; s. Hiram Happy; d. Ardelice.
2. Wm. Pears, Toronto Junction, May; s. Clear Grit; d. Island Buoy.
3. Samuel Dolson, Alloa, Polly; s. Crown Imperial; d. Almonte.
4. Wm. Sager, Troy.

FOAL OF 1895.

1. J. B. Cowieson, Queensville.
2. Joseph Lawson, Brampton, Jewel; s. Wiley Buckles; d. Bessie.
3. Horace N. Crossley, Rosseau, ———; s. Fireworks, 16; d. Surefoot.
4. Wm. Sager, Troy.

PAIR MATCHED HORSES (GELDINGS OR MARES) IN HARNESS, 16 HANDS AND UNDER, AND OVER 15½ HANDS.

1. J. C. Dietrich, Galt.
2. Robt. Hatton, Owen Sound, Bill and Roctey; s. Lictor.
3. John L. Noble, Cooksville, Lady and Rosy.

PAIR MATCHED HORSES (GELDING OR MARES) IN HARNESS, 15½ HANDS AND UNDER.

1. John Mason, Oakville { Flo; s. Pilot. / Frank Ellis; s. Frank Ellis.
2. H. Cargill & Son, Cargill { Captain; s. General Jackson; d. Daisy. / Cricket.
3. J. G. Martin, Stouffville { Little John; s. Boy Jack; d. by Clear Grit. / Lucy B.; s. Gen. Brock; d. Whirlwind.
4. Wm. F. Wilson, Wilsonville { Baldy; s. Stanton; d. Kit. / Net; s. Weldorf.
5. W. A. Robertson, Oakville { Elsie; s. Frank Ellis. / Frank; s. Frank Ellis.

SINGLE HORSE (GELDING OR MARE) IN HARNESS, 16 HANDS AND UNDER, AND OVER 15½ HANDS.

1. J. F. Eastwood, Toronto, Belleview.
2. J. D. Orr, Meadowvale, Dolly O.; s. Clear Grit; d. Erin Girl.
3. Thos. Bowes, Oakwood, Paddy Sprague; s. Patriot Boy; d. Whirlwind.
4. E. W. Cox, Toronto. Record 2.22½; s. Highland Boy; d. Gen. Stanton.
5. S. T. Clapp, Toronto, Avalon; s. Doctor Carver; d. American Star.

SINGLE HORSE (GELDING OR MARE) IN HARNESS, 15 HANDS AND UNDER.

1. C. A. Burns, Toronto, Evergood; s. Harold; d. by Clear Grit.
2. W. B. Moore, Lindsay.
3. J. D. Graham, Toronto, Jessie Wilkes; s. Oliver Wilkes.
4. Israel Haviland, Wilsonville, Lady Stanton; s. Stanton, Jr.
5. Geo. Martin, Stratford.

BEST MARE OF ANY AGE.

H. G. Boag, Queensville, Bella B. See above.

STANDARD BRED TROTTERS.

STALLION, FOUR YEARS OLD AND UPWARDS, NOT LESS THAN 15½ HANDS.

1. J. E. Marsh, Markdale, Antillo, 21307; s. Antillo; d. Lady C.
2. Randal Learn, Ridgetown, Goldring, 12899.
3. Dent Dalton, Delhi, Shadeland Duval, 13755; s. Wilkes Nutwood, 8000; d. Amelia.

STALLION, THREE YEARS OLD.

1. Harry Webb, Toronto, Baron Brown; sire, Bermuda, 5874; dam, Maud X.
2. Geo. Jackson & Son, Downsview, Sylvigo; sire, Egotist; dam, Sylvia.
3. R. F. Dygert, Hamburg, Trustwell, 27584; sire, King Nutwood, 10291; dam, Mattie Windsor.

STALLION, TWO YEARS OLD.

1. Hugh Smith, Claude, Uncle Bob, 23785; sire, Wildbrine, 10073; dam, Brownie.
2. Harry Webb, Toronto, Bordeaux; sire, Bermuda, 5874; dam, LaVeta.
3. H. W. Lumley, Ridgetown, Benwell, 25824.

YEARLING COLT—ENTIRE.

1. Hugh Smith, Claude, Bonnie Scott, 25751; sire, Wiry Jim, 15617; dam, Brownie.

STALLION OF ANY AGE.

J. E. Marsh, Markdale, "Antello," see above.

GELDING OR FILLY, THREE YEARS OLD.

1. Harry Webb, Toronto, Wiltonwood; sire, Wilton, 5982; dam, Maggie Nutwood.
2. Hugh Smith, Claude, Brown Tasker, 23748; sire, Tasker, 16045; dam, Brownie.
3. Harry Webb, Toronto, Veta Red; sire, Red Wilkes, 5982; dam, LaVeta.

GELDING OR FILLY, TWO YEARS OLD.

1. Harry Webb, Toronto, Almina, sire, Bermuda, 5874; dam, Mary Brown.
2. M. H. Nicholls, Hamilton, Amelia Wilkes; sire, Almonte, 11242; dam, Dolly.
3. Harry Webb, Toronto, Prince Geneva; sire, Geneva; dam, by Clay Wilkes.

YEARLING, GELDING OR FILLY.

1. Harry Webb, Toronto, Alecia Bell; sire, Liberty Bell; dam, Alecia Nutwood.
2. Harry Webb, Toronto, Royallette; sire, Royal Wilton; dam, Mary Bashford.
3. Harry Webb, Toronto, Geneva; sire, Pocahontas Boy.

BROOD MARE, WITH FOAL OF THE SAME BREED BY HER SIDE.

1. George Jackson & Son, Downsview, Tibbie; sire, Girl Stanton; dam, Mattie.
2. Hugh Smith, Claude, Brownie; sire, General Brock 10141; dam, Birdie.
3. George Jackson & Son, Downsview, Katie Hyland; sire, Highland; dam, Catamaran.

FOAL OF 1895.

1. Hugh Smith, Claude, ———; sire, Wiry Jim; dam Brownie.
2. George Jackson & Son, Downsview.
3. George Jackson & Son, Downsview.

PAIR OF MATCHED HORSES (GELDINGS OR MARES) IN HARNESS.

George Jackson & Son, Downsview, Molly and Fairy.

SINGLE HORSE (GELDING OR MARE) IN HARNESS.

1. George Jackson & Son, Downsview, Reina Belmont; sire, Belmont Star; dam, Tibbie.

BEST MARE OF ANY AGE.

Harry Webb, Toronto, "Alicia Bell."

CARRIAGE HORSES.

STALLION, FOUR YEARS OLD AND UPWARDS, 16¼ HANDS AND OVER.

1. Joseph Manarey, Going, Prince Arthur.
2. Thomas Irving, Winchester, Bon Ton, 1689; sire, Favorite 581; dam, Kitty, 1155
3. Woodstock German Coach Co., Currie's, Adam, 508; sire, Ethelbert, 352; dam, Framen Helloff.
4. A. B. Hobart, Woodstock, Kaiser Frederick; sire, Rodesta, 286; dam, Favorite, 313.

STALLION, THREE YEARS OLD.

3. J. L. Reid, Meadowvale, Salesman; sire, Shining Light, 317; dam, Fuschia.

STALLION, TWO YEARS OLD.

1. W. C. Brown, Meadowville, Prince George; sire, Prince Victor; dam, Hattie Bell.
2. John C. McCarty, Newmarket, Firebrand, sire, Firefly; dam, Belle Haight.
3. Dent Dalton, Delhi, Charley Duval; sire, Shadeland Duval, 13755; dam, Daisy Patchen.

YEARLING COLT—ENTIRE.

1. J. L. Reid, Meadowville, Rainbow; sire, Reigent; dam, Hycintha.

STALLION OF ANY AGE.

Jos. Manarey, Going, "Prince Arthur," see above.

PAIR OF MATCHED CARRIAGE HORSES (MARES OR GELDINGS), NOT LESS THAN 16½ HANDS.

1. D. T. Lowes, Brampton.
2. C. Dennis, Toronto; Nell and Mag.
3. F. Chisholm, Milton; Count and Kendall.
4. A. B. G. Tisdale & Son, Brantford { Plato; sire, Prince Elgin. / Pliny; sire, Egmont.

PAIR MATCHED CARRIAGE HORSES, NOT LESS THAN 15¾ AND UNDER 16½ HANDS.

1. T. G. Blackstock, Toronto, George and Prince.
2. Geo. Gooderham, Toronto, Dot and Harry.
3. D. H. Grand & Co., Buffalo, N.Y.
4. J. D. Graham, Toronto { Prince; sire, Goddart. / Cadet; sire, Duke.

GELDING OR FILLY, THREE YEARS OLD.

1. Robert Talbot, Everton, Jennie; sire, Longspur; dam, ———.
2. H. Cargill & Son, Cargill, Fly; sire, Clear Grit; dam, Fly.
3. George Jackson, Cooksville, Blossom; sire, Barnaby; dam, Victoria.

GELDING OR FILLY, TWO YEARS OLD.

1. H. G. Boag, Queensville, Johnnie; sire, Mineola; dam, Sharon Maid.
2. Ira Boyer, Claremont, Jack of Hearts.
3. Abner Summerfeldt, Cashel.

YEARLING, GELDING OR FILLY.

1. Abner Summerfeldt, Cashel.
2. G. H. Hastings, Deer Park, Princess; sire, Star Maple; dam, Duchy.
3. R. M. Wilson, Delhi, Flora; sire, Wuterich; dam, Daisy.

BROOD MARE, 16 HANDS AND OVER, WITH FOAL OF THE SAME BREED BY HER SIDE.

1. J. L. Reid, Meadowvale, Fushia; sire, Salesman; dam, Hycintha.
2. R. M. Wilson, Delhi, Nellie Stanton; sire, Stanton, 1800; dam, Roxy.
3. Harris & Reynolds, Oakville, Bell; sire, Ryshawk; dam, Lapidish.

FOAL OF 1895.

1. J. L Reid, Meadowvale.
2. R. M. Wilson, Delhi, Goldene; sire, Coldfellow; dam, Nellie Stanton.
3. Harris & Reynolds, Oakville ———; sire, Wilson; dam, Bell.

SINGLE CARRIAGE HORSE (GELDING OR MARE) IN HARNESS, 15¾ TO 16½ HANDS.

1. Andrew Smith, Toronto.
2. D. H. Grand & Co., Buffalo.
3. F. Chisholm, Milton; Myrtle.
4. F. E. Dalton, Niagara Falls, S.; Roseaire.

SINGLE CARRIAGE HORSE (GELDING OR MARE) IN HARNESS NOT LESS THAN 16½ HANDS.

1. Thomas Brownbridge, Brampton.
2. D H. Grand & Co., Buffalo.
3. Thos. Irving, Winchester, Lord Clifton; sire, Shining Light; dam, Bright Eyes.
4. J. Goodfellow, Toronto, Fly.

BEST MARE OF ANY AGE.

Robert Talbot, Everton, "Jennie."

CLYDESDALES.

Clydesdale Stallion, Four Years Old and Upwards.

1. D. & O. Sorby, Guelph, Ont., Grandeur (imp.) [1724] (6814); brown, spot on forehead, white hind foot; foaled 1887. Bred by Wm Hunter, Garthland Mains, Stranraer, Scot.; sire, Darnley (222); dam, Trim of Garthland (4699), by Farmer (286), etc.
2. Thos Colquhoun, Gorrie, Esquire of Park (imp.) [2178] 6808 (7699), brown, star on face, hind feet white; foaled in May, 1888. Bred by Wm. Currie, Scot.; sire, Laird Darnley (3748); dam, Lily (7144), by Stanley (3354), etc.
3. John Davidson & Son, Ashburn, Ont., Tofty (imp.) [2123] (9452); bay, star on face, legs black; foaled May, 1890. Bred by S. Campbell, Jr., Tofthills, Kintore, Scot.; imported 1891 by John Isaac, Markham, Ont.; sire, Botanist (4872), dam, Belinda (7048), by Grand Turk (1148), etc.
4. Cheyne & Gardner, Britannia, MacIndoe (imp.) [2193] (6040); bay, star on face, fore and hind foot white, near hind leg white; foaled April, 1886. Bred by John Elliott, Carlisle, Scot; imported by Graham Bros., Claremont; sire, Macgregor (1487); dam, Maybloom (5367), etc.

Stallion, Three Years Old.

1. Samuel McArthur, Oro Station, Grand National [1951]; bay, white face, fore feet and nigh hind leg white, off hind leg partly white; foaled June 3rd, 1892. Bred by Alex. Cameron, Ashburn; sire, Tannahill (imp.) [1205] (4745); dam, Mary's Pet (imp.) [1643], by Cairnbrogie Stamp, etc

Stallion, Two Years Old.

1. Graham Bros., Claremont, Symmetry II. [2091]; bay, stripe on face, hind legs and near fore pastern white; foaled April 16th, 1893. Bred by exhibitors; sire, Symmetry (imp.) [1713] (9431); dam, Nelly (imp.) [870], by Laird of Bute (4490).
2. W. J. Howard, Dollar, City Boy [2174]; bay, stripe on face, white hind feet; foaled May, 1893. Bred by exhibitor; sire, The Granite City (imp.) [709] [5397]; dam, Spunk [2199], by Lord Salisbury (imp.) [246] 382, (2877), etc.

Yearling Colt—Entire.

1. Jas. I. Davidson & Son, Balsam, Boydston Stamp [2190], brown, stripe on face, hind legs white; foaled February, 1894. Bred by exhibitor; sire, Westfield Stamp (imp.) [1819] (9467); dam, Boydston Lass [1920], etc.
2. Robert Davies, Toronto.

Clydesdale Stallion, any Age.

D. & O. Sorby, Guelph, "Grandeur," (imp.) see above.

Filly, Three Years Old.

1. Graham Bros., Claremont, Lady Flashwood [1915]; bay, ratch on face, hind legs white; foaled April, 1892. Bred by exhibitors; sire, International (imp.) [1423] (6853); dam, Effie Macgregor (imp.) [1914], etc.
2. Jas. I. Davidson & Son, Balsam, Boydston Lass VI. [2222]; bay, spot on face, off hind legs white; foaled May, 1892. Bred by exhibitors; sire, Lewie Gordon (imp.) [1602] (7918); dam, Boydston Lass II. [2007], etc.

Filly, Two Years Old.

1. S. J. Prouse, Ingersoll, Ossa.

Yearling Filly or Gelding.

1. D. & O. Sorby, Guelph, Lady Annie; sire, Mackenzie; dam, Fanny of Roadend (imp) [403].
2. Jas I. Davidson & Son, Balsam, Katie Hill III., chestnut; white on face, hind legs white; foaled May, 1894. Bred by exhibitors; sire, Westfield Stamp (imp.) [1819] (8467); dam, Kate Hill (imp.) [215] (4129), etc.
3. John Watt, Sr., Elmbank, Jess [2234]; bay, white face, three white feet; foaled May, 1895. Bred by exhibitor; sire, Macneilage (imp.) [1117½] (2992); dam, Fanny of Roadend (imp.) [403], etc.

Brood Mare, with Foal of the same Breed.

1. Robert Davies, Toronto, Pride of Thorncliffe (imp. in dam) [1937]; bay, stripe on face, hind legs white; foaled April, 1891. Bred by Major L. D. Gordon-Duff, Drummuir, Keith, Scot.; imported in dam, August, 1890, by Graham Bros., Claremont, Ont.; sire, Lord Montrose (7973); dam, Pride of Drummuir (imp.) [1325], by Culloden (5684), etc.

2. Jas. I. Davidson & Son, Balsam, Kate Hill II. (1923); bay, white face, nigh fore and off hind leg white; foaled March, 1891. Bred by exhibitors; sire, Lewie Gordon (imp.) [1602] (7918); dam, Kate Hill (imp.) [215] (4129), etc.
3. Robert Davies, Toronto, Candour (imp.) [1646]; brown, star on forehead, hind legs white; foaled May 4th, 1890. Bred by J. Williamson, Langlands, Kirkcudbright, Scot.; imported in 1891 by Graham Bros., Claremont, Ont.; sire, Macgregor (1487); dam Darling (5148), by Farmer (288), etc.

FOAL OF 1895.

1. Graham Bros., Claremont, Queen's Own II, [2181]; bay, stripe on face, four white legs; foaled April, 1895. Bred by exhibitors; sire, Queen's Own (imp.) [1708] (7176); dam, Nellie (imp.) [970], by Laird of Bute (4490), etc.
2. Graham Bros, Claremont, Blanche [2250]; bay, stripe on face; foaled April, 1895. Bred by exhibitors; sire, Queen's Own (imp.) [1708] (7176); dam, Ethel Armstrong [2229], etc.
3. Jas. I. Davidson & Son, Balsam, Pride of Balsam [2189]; bay, spot on face, black legs; foaled March, 1895. Bred by exhibitors; sire, Totty (imp.) [2123] (9452); dam, Kate Hill II. [1923], etc.

MARE WITH TWO OF HER PROGENY.

1. Graham Bros., Claremont, Nellie (imp.) [970]. See sec. 9.

SPAN OF CLYDESDALES (GELDINGS OR MARES)

1. Robert Davies, Toronto, "Bar Bell" and "Nelly."
2. Graham Bros., Claremont, Evergreen [1644]; light bay, star on face, four white feet; foaled May, 1888. Bred by S. Smilie, Hensall, Ont.; sire, Macalpine (imp.) [1514] (2986); dam, Lady Corsewall (imp.) [191], etc.

Daisy (imp.) [1652]; bay, white on face and hind legs; foaled June 11th, 1888. Bred by A. Shaw, Stranraer, Scot.; imported by Graham Bros., Claremont, sire, Belted Knight (1395); dam, Jean of Low Ardwell (6723), etc.

3. Hendrie & Co. (Ltd.), Toronto, Empress [2173]; bay, stripe on face, four white feet; foaled May, 1891. Bred by Wm. Foster & Son, Humber; sire, Pride of Perth (imp.) [282] (2336); dam, Nettie of Castlemore [368], etc.

Jesmine [2214]; bay, stripe on face, three legs and one fore fetlock white; foaled May, 1890. Bred by Jas. Mitchell, Tormore; sire, Fitzjames (imp.) [806] (5763); dam, Candie (imp.) [2212] by Callendar (4901), etc.

BEST MARE OF ANY AGE.

Robert Davies, Toronto, "Nelly," see above.

ENGLISH SHIRES.

STALLIONS, FOUR YEARS OLD AND UPWARDS.

1. Horace N. Crossley, Rosseau, Bravo II. (imp.) [250] (12835); bay, foaled in 1888. Bred by R. N. Sutton, Nelthorpe, Scawby Hall, Brigg, Eng., imported by exhibitors; sire, Will-o'-the Wisp (6574; dam, Bodicea, by True Britton (2684), etc.
2. Morris, Stone & Wellington, Welland, Pride of Hatfield (imp.) (2656); bay, stripe on face and three white legs; foaled in 1890. Bred by George Smales, Gowdall, Selby, Yorkshire, Eng.; imported in 1894 by exhibitors; sire, Lincolnshire Lad 2nd (1365); dam, Flower, by Gay Lad, etc.
3. J. L. Clark, Brampton, Lincoln Wonder [203].

STALLION, THREE YEARS OLD.

1. James Gardhouse & Son, Highfield, Duke of Blagdon (imp.) [257]; bay, dark points; foaled 1892 Bred by Clement Keevil, New Maiden, Surrey, Eng.; imported 1893 by exhibitor; sire, Blagdon Lincoln (12797); dam, Blagdon Brunette, by Lincolnshire Lad 2nd, etc.

STALLION, ANY AGE.

Horace N. Crossley, Rosseau, "Bravo II." See above.

FILLY, THREE YEARS OLD.

1. Morris, Stone & Wellington, Welland, Beatrice (imp.) [97]; bay, star on forehead, three white feet; foaled 1892. Bred by Walter Johnson, Hatfield, Doncaster, York, Eng., imported 1894, by exhibitors; sire, Engineer II (9300); dam, Madam Brown (6646), by Royal Albert, Jr. (8110), etc
2. Morris, Stone & Wellington, Welland, Bridget [92]; bay, two white hind stockings, nigh fore foot white, star on forehead, white on nose; foaled 1892. Bred by exhibitors; sire, Prince Charles [196]; dam, Lottie [35], by Adam [65], etc.
3. H. N. Crossley, Rosseau, Rosseau Queen (imp.) [98]; bay, two white fetlocks; foaled 1892. Bred by John Thomas Brown, Althorpe, Doncaster, Eng., imported 1894 by exhibitor; sire, Trent Conqueror (12573); dam, Althorpe Excelsior, by Royal Albert (1885), etc.

FILLY, TWO YEARS OLD.

1. Morris, Stone & Wellington, Welland, Leta [101]; light bay, face white, stockings on hind legs, right front foot white; foaled January, 1893. Bred by exhibitors; sire, Chieftain II [194] (5723); dam, Lancashire Lass [70], by Honest Tom (1105), etc.

YEARLING FILLY OR GELDING.

2. H. N. Crossley, Rosseau, Rosseau Propriety (imp.) [99]; grey, four black legs foaled 1893. Bred by John Thomas Brown, Doncaster, Yorkshire, Eng.; imported 1894, by exhibitor; sire, St. Hybald (4068); dam, Althorpe Dewdrop, by Sampson V (4670), etc.

BROOD MARE, WITH FOAL OF SAME BREED BY HER SIDE.

H. N. Crossley, Rosseau, Queen of Althorpe (imp.) [10]; light bay, white on face, two white hind legs, little white on front feet; foaled 1887. Bred by John Thomas Thorne, Althorpe, Doncaster, Eng.; imported in 1890 by exhibitor; sire, Renown II (6318); by Roan George.

Morris, Stone & Wellington, Welland, Elsie Morin (imp.) [34]; brown, star on face, white hind foot; foaled 1884. Bred by Edward Belton, Tudworth, Yorkshire, Eng.; imported 1886 by exhibitors; sire, Welton Tom (3395); dam, by Red House Boy (1849), etc.

FOAL OF 1895.

1. Morris, Stone & Wellington, Welland, Major; sire, Pride of Hatfield (imp.) [256], see Sec. 1; dam, Elsie Morin (imp.) [34], see Sec. 9.
2. Horace N. Crossley, Rosseau, ————; sire, Bravo II (imp.) [250] (12835), see Sec. 1; dam, Queen of Althorpe (imp.) [10], see Sec. 9.

MARE, WITH TWO OF HER PROGENY.

1. Morris, Stone & Wellington, Welland, Elsie Morin (imp.) [34], see Sec. 9.

MARE ANY AGE.

Horace N. Crossley, Rosseau, "Queen of Althorpe." See above.

HEAVY DRAUGHT HORSES.

STALLION, FOUR YEARS OLD AND UPWARDS.

1. Graham Bros., Claremont, "Bold Boy II" (2099); sire, Rakerfield (imp.) [487] (4190); dam, Lady Montgomery (imp.) [443].
2. John Vipond, Brooklin, "Erskine Style" [2121]; sire, Erskine (imp.) [1652] (4986); dam, Brooklin Metal (imp.) [1877] (11169).
3. Joseph Alsop, Glasgow, "Lieutenant Geordie" [2125]; sire, Lord Lieutenant (imp.) [975] (4529); dam, Jessie Annan [2133].

STALLION, THREE YEARS OLD.

1. F. W. Wambold, Breslau, "Dandy Boy II," 1188; sire, Red Gauntlet (5290); dam, Kinloss Queen, 210.
2. Laing & Meharry, Port Perry, ————; sire, Old Ambition; dam, Annie Park.

HEAVY DRAUGHT GELDING.

1. Hendrie & Co, Toronto, "Douglas": sire, Macfadden; dam, Scotland's Glory,
2. Isaac Devitt & Son, Floradale, "Billy"; dam, Isabella, 451.
3. Thos. A. Farr, Thistletown.

STALLION, ANY AGE.

Graham Bros., Claremont, "Bold Boy II" [2099]. See above.

FILLY, THREE YEARS OLD.

1. Samuel McArthur, Oro Station, "Belle of Oro Station," 1951; sire, Montrave Chief (5222); dam, Silver Tail, 293.
2. J. A. Starr, Pine Orchard, "Jessie"; sire, Ace of Picks (4803); dam, Nance.
3. D. & R. McGeachy, Coleraine, "Janet"; sire, Nelson, 341; dam, Lucy of Castlemore (1339).

FILLY, TWO YEARS OLD.

1. Graham Bros., Claremont, "Queen of Atho"; sire, Queen's Own (imp.) [1708] (7176).
2. Amos Ager, Nashville, "Belle"; sire, Castlemore Bob [1425]; dam, Polly.
3. J. A. Starr, Pine Orchard, "Bonnie"; sire, Ace of Picks (4803); dam, Nance.

YEARLING FILLY OR GELDING.

1. Colin Cameron, Thistleton, "Smithfield Maid."
2. D. & O. Sorby, Guelph, "Lady Grace."
3. Isaac Devitt & Sons, Floradale, "Topsy."

BROOD MARE, WITH FOAL OF SAME BREED BY HER SIDE.

1. Francis Fenwick, Coleraine, "Belle."
2. Colin Cameron, Thistleton, "Dolly Newborn"; sire, Lord Derby; dam, by Donald Dinnie.
3. John I. Balsdon, Balsam, Louise, 7449.

FOAL OF 1895.

1. Jas. I. Davidson & Son, Balsam, "The Chief"; sire, Tofty (imp.) [2125] (9452); dam, Boydston Lass II [2007].
2. Colin Cameron, Thistleton, "The Thistle."
3. Amos Ager, Nashville.

MARE WITH TWO OF HER PROGENY.

1. Colin Cameron, Thistleton, "Dolly Newburn."

SPAN OF HEAVY DRAUGHT HORSES.
(Geldings or mares.)

1. Geo. Moore, Waterloo.
2. A. Hewson, Grahamsville, "Minn" and "Doll."
3. Isaac Devitt & Son, Floradale, "Billy" and "Aggie."

MARE, ANY AGE.

Samuel McArthur, Oro Station, "Belle of Oro Station." See above.

HACKNEYS.

STALLION, FOUR YEARS OLD AND UPWARDS.

1. Graham Bros., Claremont, Ont., Kilnwick Fireaway (imp.)—5—(3698), bay; foaled in 1890. Bred by John T. Elgey, Kilnwick, Pocklington, Eng.; sire, Lord Swanland (1834); dam, Trip, by Tripaway (2299), etc.
2. H. N. Crossley, Rosseau, Fireworks (imp.)—16—(3602); brown; foaled in 1890. Bred by Jas. Scott, Clayfield, Pocklington, Yorkshire, Eng.; imported in 1893 by exhibitor; sire, Wildfire (1224); dam, Pretty Poll (4574), by Superior (1410), etc.
3. Alex. G. Bowker, V.S., Woodstock, The Shah (imp.)—47—(2678); black; foaled in 1886. Bred by James Coker, Beetley Hall, Eng.; imported by exhibitor; sire, Adonis (12); dam, Black Bess (32); by Perfection (541), etc.

STALLION, THREE YEARS OLD.

1. R. Beith & Co., Bowmanville, Ont., Banquo—3—; dark bay, star and four white feet; foaled June, 1892 Bred by exhibitor; sire, Jubilee Chief (imp.)—1—(2122); dam, Mona (imp.)—4—, by Dictator (1471), etc.
2. Hillhurst Farm, Hillhurst, Que., Royal Dane (imp.)—11—bay, star on forehead, white fore feet; foaled May 21st, 1892. Bred by J. Richardson, Hayton, Yorkshire, Eng.; imported by exhibitors; sire, Cannyman (2882); dam, Princess Dagmar (imp.)—10—(4590), by Dangelt (174), etc.
3. R. Beith & Co., Bowmanville, Ont., Lord Roseberry 2nd—4—; brown, white off fore foot; foaled in April, 1892. Bred by exhibitors; sire, Jubilee Chief—1— (2122); dam, Florence —3—(661), by Randolph (1123), etc.

STALLION TWO YEARS OLD.

1. H. N. Crossley, Rosseau, Performer (imp.)—34—; chestnut roan; foaled in 1893. Bred by John T. Brown, Althorpe, Doncaster, Yorkshire, Eng.; imported by exhibitor; sire, Enthorpe, Performer (2073); dam, Fanny (111), by Phenomenon, etc.

YEARLING COLT—ENTIRE.

1. Hillhurst Farm, Hillhurst, Que., Gentility (imp. in dam) —54—; brown, hind ankles white; foaled 1894. Bred by R. G. Heaton, Chatters, Eng.; imported by exhibitors; sire, Agility (2799); dam, Miss Baker (4371), etc.
2. Horace N. Crossley, Rosseau, Rosseau Fireball, —39—; brown, star on nose, hind feet white, and near fore foot; foaled April, 1894. Bred by exhibitor; sire; Fireworks (imp.) —16— (3602); dam, Lady Cocking (imp.) —11— (5530), etc.
3. Hillhurst Farm, Hillhurst, Que., Danish Duke, —53—; bay, snip on nose, hind ankles white; foaled 1894. Bred by exhibitors; sire, Fordham (287); dam, Princess Dagmar (4590), etc.

STALLION ANY AGE.

Graham Bros., Claremont, "Kilnwick Fireway." See above.

FILLY, THREE YEARS OLD.

1. John Holderness, Toronto, Cherry Ripe —8—; bay, star on forehead, dark points; foaled in May, 1892. Bred by exhibitor; sire, Seagull (imp.) —8— (2261); dam, [Dandy No. 1 F. S.], etc.
2. H. N. Crossley, Rosseau, Althorpe Countess (imp.) —20—(6359; foaled in 1892. Bred by J. T. Brown, Althorpe, Doncaster, Yorkshire, Eng.; imported by exhibitor; sire, Enthorpe Performer (2973); dam, Fanny (111), by Phenomenon, etc.

FILLY, TWO YEARS OLD.

1. Hillhurst Farm, Hillhurst, Que., Matchless Maid —24—; bay; foaled April, 1893. Bred by exhibitors; sire, Fordham (imp.) —36—; dam, Nancy (imp.) —26—(4460), etc.
2. G. H. Hastings, Toronto, Fannie Bardolph —38—; chestnut, blaze on face, white feet; foaled July, 1893. Bred by exhibitor; sire, Lord Bardolph (imp) —32—(412); dam, Norfolk Duchess (imp.) —12—(2355), etc.

YEARLING FILLY.

1. Robt. Beith & Co., Bowmanville, Jessica, —25—; brown, star on forehead, four white feet; foaled April, 1894. Bred by exhibitors; sire, Jubilee Chief (imp.) —1—(2122); dam, Mona's Queen (imp.) —4—(5887), etc.
2. Graham Bros., Claremont.
3. G. H. Hastings, City, Princess of Denmark —30—; brown, blaze on face, near ankle white; foaled 1894. Bred by exhibitor; sire, Star of Mepal II. (imp.) —29—(4525); dam, Norfolk Duchess II. (imp.) —12—(2355), etc.

BROOD MARE WITH FOAL OF THE SAME BREED BY HER SIDE.

1. H. N. Crossley, Rosseau, Lady Cocking (imp.) —11— chestnut; foaled in 1883. Bred by W. F. Cocking, Croule, Doncaster, Yorkshire, Eng.; sire, Royal George (683); dam, mare by Achilles (3), etc.
2. G. H. Hastings, Toronto, Soubrette (imp.) —13—; roan, white ankle and near hind leg; foaled 1886. Bred by Jno. Grout, Suffolk, Eng.; imported by B. D. Sewell, Frederickton, N. B.; sire, Fireway (249); dam, Nancy, by Performer (522), etc.
3. G. H. Hasting, Toronto, Miss Noble [—44—]; bay, one white hind ankle; foaled 1891. Bred by exhibitor; sire, Young Nobleman (imp.)—30—(2328); dam, Victoria, by Sir Wormarly.

FOAL OF 1895.

1. Robert Beith & Co., Bowmanville, Portia, —41—; chestnut, star on forehead, white feet; foaled April, 1895. Bred by exhibitor; sire, Ottawa (imp. in dam) —2—(4440); dam, Florence (imp.) —3—(661), etc.
2. Horace N. Crossley, Rosseau, Rosseau Victoria; sire, Fireworks 16; dam, Lady Cocking 11.
3. Horace N. Crossley, Rosseau———— ; sire, Fireworks 16; dam, Lady Bird 15.

SINGLE HORSE (MARE OR GELDING) NOT MORE THAN 15¾ HANDS.

1. Hillhurst Farm, Hillhurst, Que., Miss Baker (imp.) —16—(4371); brown, one white foot; foaled in 1887. Bred by James Case, Cockthorpe Wells, Norfolk, Eng., imported in May, 1873, by exhibitors; sire, Ruby (1342); dam, Betsy Baker (1441), by Norfolk Jack (516), etc.
2. Horace N. Crossley, Rosseau, Lady Bird (imp.) —15— (5510); black, nigh hind foot white; foaled 1889. Bred by T. Watkinson, The Grange Yorkshire, Eng.; imported by exhibitor; sire, Superior (1410); dam, Jessie, by Confidence (1265), etc.
3. John Holderness, Toronto, Wild Foam, —32—; sire, Railing Farroway; dam, ————.

BEST MARE, ANY AGE.

Hillhurst Farm, Hillhurst, Que., "Miss Baker," (imp.) —16—. See above.

HACKNEY STALLION BRED AND FOALED IN CANADA, FOALED IN THE YEAR 1891, OVER 14 HANDS AND NOT EXCEEDING 15 HANDS.

G. H. Hastings, Toronto, Black Nobleman, —18— ; dark brown, foaled June, 1891. Bred by exhibitor ; sire, Young Nobleman (imp.) —30—(3328) ; dam, Norfolk Duchess (imp.) —12— (2355) by Fireway (267).

SPECIALS FOR HIGH STEPPERS—NOT NECESSARILY HACKNEYS.

PAIR MATCHED HORSES, HIGH STEPPERS (MARES OR GELDINGS), NOT MORE THAN 15¾ HANDS.

1. D. H. Grand & Co., Buffalo, N. Y.
2. John Holderness, Toronto, "Cherry Ripe" and "Wild Foam."
3. Hillhurst Farm, Hillhurst, Que., "Princess Dagmar" and "Charwoman."

SINGLE HORSE, HIGH STEPPER (MARE OR GELDING) NOT MORE THAN 15¾ HANDS.

1. L. Meredith, London.
2. D. H. Grand & Co., Buffalo, N. Y.
3. Thos. Brownridge, Brampton.

CATTLE.

SHORTHORNS.

Bull, four years old and upwards.

1. W. C. Edwards & Co., Rockland, Knight of St. John, (imp.) =17102= ; red ; calved Feb , 1891. Bred by Wm. Duthie, Aberdeen, Scot.; imported by exhibitors ; got by Cap-a-pie (58591) ; dam, Clarissa by Proconsul (54872), etc.
2. E. Gaunt & Sons, St. Helens, Earl of Morav, =16188= ; red ; calved Nov., 1890. Bred by Wm. Mackintosh, Burgoyne ; got by Eclipse =8982= ; dam, Lady Fanny (imp.) =18388=, etc.
3. John Currie & Son, Everton, War Eagle, =13015= ; red ; calved June, 1889. Bred by Arthur Johnston, Greenwood ; got by Warfare (imp.) =6452= (56712) ; dam, Daisy's Star =11479=, etc.

Bull, three years old and under four.

1. R. & S. Nicholson, Sylvan, Norseman, =16397= red ; calved Sept. 11th, 1891. Bred by Arthur Johnston, Greenwood ; got by Indian Chief (imp) =1110S= (57485) ; dam, Nonpariel of Lenton =15809= by Baron Lenton (imp.) =1222= (49081), etc.
2. Jas. P. Crerar, Shakespeare, 10th Crown Jewel, =16607= ; red ; calved Oct 25th, 1891. Bred by R. & S. Nicholson, Sylvan, got by Nonpareil Chief =13669= ; dam, 3rd Leonore of Elmsdale =12212=, by Prince Albert =3669=, etc.
3. F. C. Sibbald, Sutton West, Mazurka Duke 10th =16312= ; red ; calved Feb , 1892. Bred by exhibitor ; got by Butterfly Duke 13th =14638= ; dam, Silver Star =13175=, etc.

Bull, two years old and under three.

1. Simmons & Quirie, Ivan, Barmpton M =18240= ; roan ; calved Nov., 1892. Bred by J. & W. B. Watt Salem. got by Barmpton Hero =324= ; dam, Mysie 41st =17246=, etc.
2. H. & W. Smith. Hay, Abbotsford, =19446= ; roan ; calved Sept., 1892. Bred by exhibitors, got by Blake=15177=; dam, Village Blossom =2277=, etc
3. James Rennie, Wick, Valasco 22nd =18414= ; white ; calved Oct. 14th, 1892. Bred by R. & S. Nicholson, Sylvan ; got by Nonpareil Chief =13669= ; dam, Vacuna 11th =14038=, by Prince Albert =3669=, etc.

Bull, one year old.

1. Jas. Leask, Greenbank. Moneyfuffel Lad =20521= ; roan ; calved Dec., 1893. Bred by J. & W. Russell, Richmond Hill ; got by Topsman =17847= ; dam, Isabella 14th =13944=, etc.
2. Arthur Johnston, Greenwood, Indian Brave =21500= ; roan ; calved Jan., 1894. Bred by David Birrell, Greenwood ; got by Indian Chief (imp) =1108= (57485) ; dam, Crimson Gem =15916=, etc.
3. E. Gaunt & Sons, St. Helens, Revenue, =21053= ; roan ; calved Dec., 1893. Bred by exhibitors ; got by Earl of Morary =16188= ; dam, Lady Lovell =15926=, etc.

Bull Calf, under one year.

1. Jno. Davidson, Ashburn, Scottish Leader, =21658= ; red ; calved Nov., 1894. Bred by exhibitor ; got by Scottish Prince =14828= ; dam, Kitty Snell =11977=, etc.
2. John Miller, Markham, Aberdeen 2nd =21643= ; red ; calved Nov., 30th, 1894. Bred by exhibitor ; got by Aberdeen (imp. in dam) =18949= ; dam, Rose Montrath 5th =24131=, etc.
3. John Miller, Markham, Master of Arts, =21644= ; roan ; calved Dec., 1894. Bred by exhibitor ; got by Aberdeen (imp. in dam) =18949= ; dam. Mara Montrath =9930=, etc.
4. H. K. Fairbairn, Thedford, Wide Awake, =21624= ; red ; ca ved Oct., 1894. Bred by exhibitor ; got by Great Chief =16998= ; dam, Frances Folson 3rd =23522=, etc.
5. R. & S. Nicholson, Sylvan, Valasco 27th =21701= ; roan ; calved Nov., 1894. Bred by exhibitors ; got by Norseman =16397= ; dam, Vacuna 24th, Vol. XI., etc.

Bull of any age.

Jas. Leask, Greenbank, "Moneyfuffel Lad." See above.

Cow, four years old and upwards.

1. W. C. Edwards & Co., Rockland, Bessie of Rockland, =16719=; roan; calved Nov., 1888. Bred by exhibitors; got by Pioneer (imp.) =6411=; dam, Louise of Rockland =15391=, etc.
2. Jas. & P. Crerar, Shakespeare, Rosabel, =23333=; red and white; calved March 19th, 1891. Bred by exhibitors; got by Nobleman =13130=; dam, Red Tiley =14921=, by Laird of Kinellar =7246=, etc.
3. J. & P. Crerar, Shakespeare, Missie of Neidpath =12593=; red; calved Nov., 1885. Bred by Thos. Ballantyne & Son, Stratford; got by Methlick Hero (imp.) =2723=; dam, Missie 79th (imp.) =5179=, etc.

Cow, three years old.

1. W. C. Edwards & Co., Rockland, Missie 142nd (imp.) =23022=; dark roan; calved April, 1892. Bred by W. S. Marr, Aberdeen, Scot.; imported by D. D. Wilson, Seaforth; got by Sea King (61769); dam, Missie 88th by Ventriloquist (44180), etc.
2. J. & P. Crerar, Shakespeare, Kirklivington Duchess 8th, =23331=; roan; calved June 2nd, 1892. Bred by exhibitor; got by Nobleman =13130=; dam, Kirklivington Duchess 7th =14917=by Laird of Kinellar =7246=, etc.

Heifer, two years old.

1. Jas. & P. Crerar, Shakespeare, Ruby Hill 2nd =23335=; roan; calved May 2nd, 1893. Bred by exhibitors; got by Nobleman =13130=; dam, Red Ruby =14920=, by Laird of Kineller =7246=, etc.
2. W. C. Edwards & Co., Rockland, Lady Fame =23483=; red roan; calved Sept., 1892. Bred by J. & W. B. Watt, Salem; got by Challenge =2933=; dam, Roan Bessie =16548 =.
3. F. C. Sibbald, Sutton, Lorna 3rd, =24517=; dark red; calved March, 1893. Bred by exhibitor; got by Duke of Athol 33rd =14644=; dam, Lorna 2nd =20723=, etc.

Heifer, one year old.

1. J. I. Davidson & Son, Balsam, Village Beauty 7th (Vol. XI.); roan; calved Dec. 15th, 1893. Bred by exhibitors; got by Sittyton Chief =17060=; dam, Village Beauty 3rd =16138=, etc.
2. W. C. Edwards & Co., Rockland, Mina 2nd (Vol. XI.); red; calved Sept. 12th, 1893. Bred by exhibitors; got by Mina Chief =13670=; dam, Mina Dalhousie =16645=, by Earl of Dalhousie =3145=, etc.
3. Simmons & Quirie, Ivan, Daisy of Strathallan 12th (Vol. XI.); red; calved Nov. 27th, 1893. Bred by C. M. Simmons, Ivan; got by Mina Chief =13670=; dam, Red Rose of Strathallan 3rd=13677=, by Ercildoune =617=, etc.

Heifer Calf, under one year.

1. Simmons & Quirie, Ivan, Daisy of Strathallan 14th (Vol. XII.); roan; calved Nov. 1894. Bred by exhibitors; got by Barmpton M. =18240=; dam, Daisy of Strathallan 9th =24521=, etc.
2. John Miller, Markham, Marvel, (Vol. XII); roan; calved Sept., 1894. Bred by exhibitor; got by Aberdeen =18949=; dam, Mirth =24130=, etc.
3. R. & S. Nicholson, Sylvan, 10th Leonore of Sylvan (Vol. XII.); red; calved Oct., 1894. Bred by exhibitors; got by Norseman =16397=; dam, Leonore of Sylvan 4th =24183=, etc.
4. John Miller, Markham, Coral, (Vol. XII.); red; calved Oct. 1894. Bred by exhibitor; got by Aberdeen (imp. in dam), =18949=; dam, Circe 2nd =18174=, etc.
5. H. & W. Smith, Hay, Freida, (Vol. XII); roan; calved Nov., 1894. Bred by exhibitors; got by Abbotsford, =19446=; dam, Fragrance =22927=, etc.

Cow and two of her progeny.

1. J. & P. Crerar, Shakespeare.

Four Calves under one year old, bred and owned by exhibitor.

1. John Miller, Markham.
2. R. & S. Nicholson, Sylvan.
3. Simmons & Quirie, Ivan.

Herd consisting of one Bull and four Females over one year old, owned by the exhibitor.

1. W. C. Edwards & Co., Rockland.
2. J. &. P. Crerar, Shakespeare.
3. F. C. Sibbald, Sutton.

Female of any age.

W. C. Edwards & Co., Rockland, "Bessie of Rockland." See above.

HEREFORDS.

Bull three years old and upwards.

1. H. D. Smith, Compton Que., "Pinkham of Ingleside," 54002; sire, Young Tushingham 2nd; dam, Pink 4th.
2. F. W. Stone Estate. Guelph, "Pluto"; sire, 3rd Duke of Morston; dam, Prettymaid 16th.

Bull one year old.

1. H. D. Smith, Compton, Que., "Amos of Ingleside," 58488; sire, Wildy 15th; dam, Amy 3rd, 43430.
2. F. W. Stone Estate, Guelph. "Gracchus"; sire, Conquest; dam, Graceful, 13818.

Bull Calf under one year.

1. F. W. Stone Estate, Guelph, "Granite"; sire, Conquest; dam, Graceful, 13818.
2. H. D. Smith, Compton, Que., "Amos 2nd of Ingleside"; sire, Pinkham of Ingleside; dam, Amy 3rd, 43430.

Bull of any age.

H. D. Smith, Compton, Que., "Amos of Ingleside." See above.

Cow four years old and upwards.

1. H. D. Smith, Compton, Que., "Lady Tushingham 3rd"; sire, Lord Tushingham, 19456; dam, Lady Wintercott 12th, 13465.
2. H. D. Smith, Compton, Que., "Spot 3rd," 48222; sire, Anxiety 4th, 2947; dam, Silvia, 8649.

Cow three years old.

1. H. D. Smith, Compton, Que., "Josephine 2nd," 52219; sire, Magistrate; dam, Lady Laura 3rd.
2. F. W. Stone Estate, Guelph, "Tredegar Beauty 26th"; sire, Cherub; dam, Tredegar Beauty, 13849.

Heifer two years old.

1. H. D. Smith, Compton, Que., "Sylvan of Ingleside," 53999; sire, Young Tushingham 2nd; dam, Spot 3rd.
2. F. W. Stone Estate, Guelph, "Sweetheart 28th"; sire, Cherub, 32333; dam, Sweetheart 17th, 13881.
3. H. D. Smith, Compton, Que., "Lydia of Ingleside," 58492; sire, Young Tushingham 2nd; dam, Pink 4th.

Heifer one year old.

1. H. D. Smith, Compton, Que., "Lady Ingleside," 58489; sire, Pinkham of Ingleside; dam, Lady Tushingham 3rd.
2. F. W. Stone Estate, Guelph, "Cherry 47th; sire, Photographer, 54111; dam, Cherry 25th.

Heifer Calf under one year.

1. H. D. Smith, Compton, Que., "Jessie of Ingleside"; sire, Young Ingleside; dam, Jessie, 52218.
2. H. D. Smith, Compton, Que., "Sylvan 5th of Ingleside"; sire, Pinkham of Ingleside; dam, Spot 3rd, 48222.

Herd consisting of one Bull and four Females over one year old, owned by the exhibitor.

1. H. D. Smith, Compton, Que.
2. H. D. Smith, Compton, Que.
3. F. W. Stone Estate, Guelph.

Female of any age.

H. D. Smith, Compton, Que., "Josephine 2nd."

POLLED ANGUS.

Bull two years old.

1. Wm. Stewart & Son, Lucasville, "Lord Wanton of Willow Grove," 18984; sire, Rummymede 2nd, 5220; dam, Wanton 4th of K. Park.

Bull one year old.

1. Jas. Bowman, Guelph, "Lord Aberdeen 3rd," 20824.
2. Wm. Stewart & Son, Lucasville, "Hero of W. G.," 18986; sire, Lord Forest; dam, Hilda, 8739.

Bull Calf under 1 year.

1. Jas. Bowman, Guelph, "Bonnie Lad"; sire, Lord Aberdeen; dam, Kyma 2nd, 18920.
2. Wm. Stewart & Son, Lucasville, "Emlyn of W. G."; sire, Lord Forest; dam, Emlyn's Favorite.
3. Wm. Stewart & Son, Lucasville, "Hectorio."

Bull of any age.

Jas. Bowman, Guelph, "Lord Aberdeen 3rd." See above.

Cow four years old and upwards.

1. Jas. Bowman, Guelph, "Kyma 2nd," 18920.
2. Wm. Stewart & Son, Lucasville, "Caroline of Verulam," 5347; sire, Ermine Bearer; dam, Caroline of Ambleside, 2764.
3. Jas. Bowman, Guelph, "Mysie 2nd of Verulam," 5354.

Cow three years old.

1. Jas. Bowman, Guelph, "Kyma of Tweedhill," 17606.
2. Wm. Stewart & Son, Lucasville, "Emlyn's Favorite," 16544.

Heifer one year old.

1. Wm. Stewart & Son, Lucasville, "Favorite W. G.," 20983; sire, Emlyn, 13211; dam, Ardgowan Favorite, 8087.
2. Wm. Stewart & Son, Lucasville, "Beauty of W. G."; sire, Lord Forest, 13152; dam, Topsy of W. G.
3. Wm. Stewart & Son, Lucasville, "Mayflower of W. G."; sire, Lord Forest; dam, Mayflower of Bli Bro.

Heifer Calf under one year.

1. Wm. Stewart & Son, Lucasville.
2. Jas. Bowman, Guelph, "Bowman's No. 1"; sire, Jus, 8445; dam, Kyma 3rd, 19809.

Herd consisting of one Bull and four females, over one year old, owned by the exhibitor.

Wm. Stewart & Son, Lucasville.

Female of any age.

Jas. Bowman, Guelph, "Kyma 2nd," 18920. See above.

GALLOWAYS.

Bull three years old and upwards.

1. D. McCrae, Guelph, "Canadian Borderer," 5945, sire, Scottish Borderer; dam, Lizzie 7th, 8935.
2. John Sibbald, Annan, "Ottawa," 8955; sire, Guy of Claverhouse; dam, Countess of Galloway 3rd, 6413.
3. A. M. & R. Shaw, Brantford, "MacCartney," 9739; sire, Glencraig; dam, Caroline, 5932.

Bull two years old.

1. D. McCrae, Guelph, "College Boy," 10395; sire, Galloway Boy; dam, Lizzie, 9687.
2. A. M & R. Shaw, Brantford, "Dandy Jim," 10387; sire, Count Monk; dam, Gem 3rd of Drumlanrig, 9187.

Bull one year old.

1. D. McCrae, Guelph, "Maclaurin," 10846; sire, Norfolk; dam, Lady Monk 2nd, 9492.
2. A. M. & R. Shaw, Brantford, "Prince of Blackness," 10800; sire, MacCartney; dam, Flora McErin, 5735.
3. A. M. & R. Shaw, Brantford, "Ladas," 10801; sire, MacCartney; dam, Gem 3rd of Drumlanrig, 9187.

Bull Calf under one year.

1. A. M. & R. Shaw, Brantford, "Victor Wild," 11288; sire, MacCartney; dam, Rosy McErin, 8507.
2. D. McCrae, Guelph, "Balmahie"; sire, Macdonald; dam, Maid Marion B., 9750.
3. John Sibbald, Annan, "Amega," 11313; sire, Ottawa; dam, Countess of Glencairn 3rd, 6116.

Bull of any age.

D. McCrae, Guelph, "Canadian Borderer," 5945. See above.

Cow four years old and upwards.

1. John Sibbald, Annan, "Countess of Glencairn 3rd," 6116; sire, Claverhouse; dam, Countess of Glencairn, 4617.
2. D. McCrae, Guelph, "Good Girl of Girlietown," 7431; sire, Baliol; dam, Eva, 2844.
3. A. M. & R. Shaw, Brantford, "Ailie Anderson," 6668; sire, Chinaman; dam, Mary Anderson, 5734.

Cow three years old.

1. D. McCrae, Guelph, "Semiramis C.," 9749; sire, Stanley O. E. F., 2837; dam, Semiramis XIX., 9609.
2. D. McCrae, Guelph, "Maid Marion B."; sire, C. Borderer, 3845; dam, Maid Marion A., 6773.
3. D. McCrae, Guelph, "Duchess IX.," 9752; sire, Squire Porter, 6765; dam, Duchess VII., 9590.

Heifer two years old.

1. D. McCrae, Guelph, "Lady Lumloden," 10277; sire, The Cob; dam, Lady Constance, 9571.
2. A. M. & R. Shaw, Brantford, "Mary Anderson 2nd," 10383; sire, Count Monk; dam, Ailie Anderson, 6668.
3. John Sibbald, Annan, "Rachel 4th," 10203; sire, Claverhouse; dam, Rachel, 665.

Heifer one year old.

1. D. McCrae, Guelph, "Ranee 10th," 10855; sire, Stanley 2nd; dam, Ranee 4th, 5544.
2. John Sibbald, Annan, "Duchess Louise 7th," 10700; sire, Claverhouse; dam, Duchess Lorne 2nd, 2830.
3. A. M. & R. Shaw, Brantford, "Countess of High Park," 10803.

Heifer Calf under one year.

1. D. McCrae, Guelph, "Adela of Flamboro."
2. D. McCrae, Guelph, "Queen Vic."
3. A. M. & R. Shaw, Brantford, "Myrtle Maid," 11291.

Herd consisting of one Bull and four Females.

1. D. McCrae, Guelph.
2. A. M. & R. Shaw, Brantford.
3. John Sibbald, Annan.

Female of any age.

John Sibbald, Annan.

DEVONS.

Bull three years old and upwards.

W. J. Rudd, Eden Mills, "Dainty Davy," 1011; sire, Rose's Duke, 954; dam, Effie, 963.

Bull two years old.

1. W. J. Rudd, Eden Mills, "Tom," 1031; sire, Prince James, 953; dam, Moss Rose, 1005.
2. Ralph R. Rudd, Eden Mills, "Carlo," 1008; sire, Billie, 898; dam, Emma, 1009.

Bull one year old.

W. J. Rudd, Eden Mills, Rob R.," 1030; sire, Billie, 998; dam, Roby, 1018.

Bull Calf under one year.

1. W. J. Rudd, Eden Mills, "King," 1037; sire Young Ensign, 925; dam, Rose II., 1037.
2. Ralph R. Rudd, Eden Mills, "Fireman," 1035; sire, Dainty Davy, 1011; dam, Maude, 1017.

Bull of any age.

W. J. Rudd, Eden Mills, "Rob R.," 1030. See above.

Cow four years old and upwards.

1. W. J. Rudd, Eden Mills, "Beauty 2nd," 1032; sire, Duke, 947; dam, Beauty, 800.
2. Ralph R. Rudd, Eden Mills, "Maude," 1017; sire, Young Ensign, 925; dam Rose, 953.

Cow three years old.

1. W. J. Rudd, Eden Mills, "Rose 2nd," 953; sire, Young Ensign, 925; dam, Rose, 953.
2. Ralph R. Rudd, Eden Mills, "Fanny 2nd," 1033; sire, Young Ensign, 925; dam, Fanny, 985.

Heifer two years old.

1. Ralph R. Rudd, Eden Mills, "Fanny 3rd," 1035; sire, Billie, 998; dam, Fanny, 985.
2. W. J. Rudd, Eden Mills, "Beauty 3rd," 1034; sire, Billie, 998; dam, Beauty II., O. E. F., 1032.

Heifer one year old.

1. Ralph R. Rudd, Eden Mills, "Blossom G.," 1084; sire, Billie, 998; dam, Gem, 986.
2. W. J. Rudd, Eden Mills, "Cherry B.," 1082; sire, Billie, 998; dam, Beauty II., O. E. F., 1032.

Heifer Calf under one year.

1. Ralph R. Rudd, Eden Mills, "Queen D.," 1008; sire, Dainty Davy, 1011; dam, Dido, 951.
2. W. J. Rudd, Eden Mills, "Bell J.," 1086; sire, Dainty Davy, 1011; dam, Julia, 1013.

Herd consisting of one Bull and four Females over one year old, owned by the exhibitor.

1. W. J. Rudd, Eden Mills.
2. Ralph R. Rudd, Eden Mills.

Female of any age.

W. J. Rudd, Eden Mills, "Beauty 2nd."

AYRSHIRES.

Bull three years old and upwards.

1. R. G. Stacey, Lyn, "Carlyle of Lessnessock," (imp.)—1655— ; white and brown; calved May 1st, 1892. Bred by R. Montgomerie, Lessnessock, Scotland; imported by R. D. Steacy, Brockville; sire, Cock-a-birdie of Drumjoan, (1204); dam, Hillhead 4th of Lessnessock, (7844), by Lord Randolph of Dumfrieshire (7844), etc.
2. D. McLachlan, Petite Cote, Que., "Silver King" (imp. in dam)—1138—(5809); white and brown; calved Sept., 1890. Bred by A. Mitchell, Barcheskie, Scot.; imported by Thos. Brown, Petit Cote, Que.; sire, Traveller (1441); dam, Nellie Osborne (imp.)—2018—(5358), etc.
3. Jas. McCormack & Son, Rockton, "Sir Laughlin"—1156—; red and white; calved March 3rd, 1890. Bred by David Nichol, Cataraqui; sire, Norseman—478—; dam, Silvia—856—, by Stonewall —151—, etc.
4. John Newman, Lachine, Que., "Glencoe" —1602—; red and white; calved March 16th, 1891. Bred by Thos. Brown, Petite Cote, Que.; sire, Bonnie Scotland—a214—; dam, Nellie of Barcheskie (imp.)—2019—(6992), etc.

Bull two years old.

1. Jas. McCormack & Son, Rockton, "Jack Morton"—1386—; white and red; calved Sept., 1892. Bred by David Morton & Sons, Hamilton; sire, Royal Chief (imp.)—75—(1647); dam, Beauty of Ayrshire (imp.)—1202—(5508), etc.
2. Thos. Guy, Oshawa, "Lord Derby"—1450—; white and red; calved August 6th, 1892. Bred by exhibitor; sire, Baron of Park Hill—818—; dam, Dahlia—1565—, by Stoncalsay 4th—255—, etc.
3. John Newman, Lachine, Que., "Dandy Pat," 7505; sire, Glencoe, 5810; dam, Sprightly III., 1851.

Bull one year old.

1. Alex. Hume & Co., Burnbrae, "Prince of Barcheskie," (imp. in dam)—1656—; white and brown; calved Feb., 1894. Bred by A. Mitchell, Barcheskie, Scot., imported by exhibitors; sire, Norseman of Balmangan (3035); dam, Eva of Barcheskie (imp.)—2505—, etc.
2. John Newman, Lachine, Que., "Dandy Dan," 7503; sire, Glencoe, 5810; dam, Dandy of Petite Cote, 5369.
3. Kain Bros., Byron, "Neidpath Hero"—1753— ; white and brown; calved March, 1894. Bred by Thomas Ballantyne & Son, Stratford; sire, Beauty's style of Auchenbrain (imp.) —1129— ; dam, Fleck 2nd of Auchenbrain (imp.)—2021—, etc.
4. R. G. Steacy, Brockville, "Lord Douglas 1st of Maple Grove," (imp. in dam)—1654—; white, with brown spots; calved Feby. 7th, 1894. Bred by Hugh Drummond, Craighead, Scotland; imported in dam by D. B. Steacy, Brockville; sire, Lord Glasgow (2681); dam, Love 4th of Craighead (imp.)—(2602)—(8043), etc.

Bull Calf under one year.

1. Alex. Hume & Co., Burnbrae, "Dominion Lad"—1802—; red and white; calved Aug. 3rd, 1894. Bred by John H. Douglas, Warkworth; sire Dominion Chief—1214—; dam, Amy—1861—, etc.
2. Thos. Guy, Oshawa.
3. Wm. Stewart & Son, Menie.
4. D. McLachlan, Petite Cote, Que., "Blooming Heather," 7486; sire, Silver Kind, 5809; dam, Lady Heather 2nd, 6054.

Bull of any age.

R. G. Steacy, Brockville, "Carlyle of Lessnessock" (imp.)—1655. See above.

Cow four years old and upwards.

1. Robert Redford, St. Anne de Bellevue, Que., "Annie of Barcheskie," 5357; sire, Blairquham, 362; dam, Annie of Fenton, 5511.
2. R. G. Steacy, Brockville, "Lady" Diana (imp.)—2046—. white and brown; calved April, 1891. Bred by B. & P. Wardrop, Garlaff, Scotland; imported by B. D. Steacy, Brockville; sire, Father O'Flynn of Garlaff, (1987); dam, Dodaldy, by King Coil (431).
3. R. G. Steacy, Brockville, "Bloomer 5th"—2601—; sire, Wallace 2nd—1534—; dam, Bloomer, 3446.
4. John Newman, Lachine, Que., "Ardgowan Beauty," 6399; sire, Roger III. of P. H., 5119, dam, Mary Gold, 5727.

Cow three years old.

1. R. G. Steacy, Brockville, "May Queen," 2500; sire, Duke of Wellington, 2219; dam, Dewdrop 3rd, 4171.
2. Thos. Guy, Oshawa, "Dolly of the Lake"—2260—; red and white; calved Sept. 25th, 1891. Bred by exhibitor; sire, Baron of Parkhill—878—; dam, Dolly—760—, by Sir Garnet—212—, etc.
3. John Newman, Lachine, Que., "Snow Flake Lady," 6152; sire, Roger 3rd of P. H., 5119; dam, Lamira, 5724.
4. R. G. Steacy, Lyn, Blinkbonny (imp.)—2043—(8583); white and dark brown; calved March 15th, 1892. Bred by Robert McKinley, Hillhouse, Lanark, Scot.; imported by B. D. Steacy, Brockville; sire, Adjutant (1819); dam, Daisy 3rd.

Heifer, two years old.

1. Wm. Stewart, Jr., & Son, Menie, Scotch Lassie Jean—2230—; white with red markings; calved Sept., 28th, 1892. Bred by exhibitors; sire, White Prince 2nd, (imp. in dam)—808—; dam, Jessie Stewart —538—, by Success—305—, etc.
2. Kains Bros., Byron, Maggie, 2296; red and white; calved May, 1893. Bred by exhibitors; sire, Castle Douglas (imp.)—1126—; dam, Alice of Byron—485—, by Watty Mars—268—, etc.
3. John Newman, Lachine, Que., Mollie N., 7504; sire, Glencoe, 5810; dam, Mary Gold, 5727.
4. James McCormack & Son, Rockton, Primrose 8th; sire, Sir Laughlin—1156—; dam, Primrose 5th —421—.

Heifer, one year old.

1. W. Stewart & Son, Menie, Maggie Lauder 2nd—2692—; red and white; calved Dec., 1833. Bred by exhibitors; sire, White Prince 2nd (imp. in dam)—808—; dam, Lady London—1558—, etc.
2. W. M. & J. C. Smith, Fairfield Plains, Annie Laurie—2492—; red and white; calved Oct. 16th, 1893. Bred by exhibitors; sire, Hamilton Chief—875—; dam, George's Annie—1941—, by Toronto Chief —437—, etc.
3. W. Stewart & Son, Menie, Annie Laurie 2nd—2590—; white, red marks; calved Oct., 1893. Bred by exhibitors; sire, White Prince 2nd (imp. in dam)—808—; dam, Jessie Stewart—538—, etc.
4. John Newman, Lachine, Que., Gracie A., 7507; sire, Glencoe, 5810; dam, Snowflake Lady, 6152.

Heifer Calf, under one year.

1. Jas. McCormack & Son, Rockton, "Beauty."
2. Robert Redford, St. Anne de Bellevue, Que., "Effie of St. Anne," 7208.
3. D. McLachlan, Petite Cote, Que., "Flow Gently," 7485.
4. Wm. Stewart & Son, Menie, "Moss Rose"—2695—; red and white; calved Dec., 1894. Bred by exhibitors; sire, Douglas of London—1384—; dam, Ayrshire Maggie—1972—, etc.

Heifer Calf under six months old.

1. Alex. Hume, Burnbrae, "Bonnie Doon"—2767—.
3. Thomas Guy, Oshawa.
4. Isaac Holland, Culloden, Bessie Bell, 2795.

Bull and four of his progeny, all bred and owned by exhibitor.

1. Wm. Stewart & Son, Menie.
2. Jas. McCormack & Son, Rockton.
3. John Newman, Lachine, Que.
4. D. McLachlan, Petite Cote, Que.

Four Calves under one year old, bred and owned by exhibitor.

1. Robert Redford, St. Anne de Bellevue, Que.
2. W. Stewart & Son, Menie.
3. Alex. Hume, Burnbrae.
4. Jas. McCormack & Son, Rockton.

Herd consisting of one bull and four females over one year old, owned by exhibitor.

1. R. G. Steacy, Brockville.
2. Jas. McCormack, Rockton.
3. D. McLachlan, Petite Cote, Que.
4. W. Stewart & Son, Menie.

Female of any age.

Robert Redford, St. Anne de Bellevue, "White Floss," 5664. (See above.)

JERSEYS.

Bull, three years old and upwards.

1. Mrs E. M. Jones, Brockville, "Lilimur Rioter."
2. J. L. Clark, Brampton, "Mighty Dollar."
3. Mrs. J. McClure, Brampton, "Prince of Elmbank."
4. J. H. Smith & Son, Highfield, "Hugh Alfred of Oaklawn."

Bull, two years old.

1. J. H. Smith & Son, Highfield, "King of Highland."
2. George Smith & Son, Grimsby.
3. B. H. Bull, Brampton, "Sir Ollie."
4. A. McLean Howard, Jr., Toronto.

Bull, one year old.

1. Geo. Smith & Son, Grimsby.
2. Wm. Bacon, Orillia, "Erile of Manorfield."
3. Wm. Bacon, Orillia, "Kaizer Fritz, Jr."
4. A. McLean Howard, Jr., Toronto.

Bull Calf under one year.

1. A. McLean Howard, Toronto.
2. J. M. McKay, Elmbank, "Star of Elmbank."
3. Mrs. E. M. Jones, Brockville, "Royal Signal."
4. J. H. Smith & Son, Highfield, "Dandy Jim."

Bull of any age.

Mrs E. M. Jones, Brockville, "Lilimur Rioter."

Cow, four years old and upwards.

1. Wm. Rolph, Markham, "Belvoir Pet."
2. J. H. Smith & Son, Highfield, "Signal Rosa May."
3. Mrs. E. M. Jones, Brockville, "Gipsy of Spruce Grove."
4. Mrs. E. M. Jones, Brockville, "Miss Satanella, 2nd.

Cow, three years old.

1. Geo. Smith & Son, Grimsby.
2. J. H. Smith & Son, Highfield.
3. Wm. Rolph, Markham.
4. W. J. Thompson, Orkney.

Heifer, two years old.

1. Mrs. E. M. Jones, Brockville, "Beauty of Delta."
2. J. H. Smith & Son, Highfield, "Violet of Highfield."
3. Geo. Smith & Son, Grimsby.
4. Wm. Rolph, Markham, "Primrose of Park's Pride."

Heifer, one year old.

1. Mrs. E. M. Jones, Brockville, "Carlo's Caroline."
2. J. H. Smith & Son, Highfield, "Iva of Highfield."
3. B. H. Bull, Brampton, "Sunbeam of Brampton."
4. Neil Smith, Brampton, "June's Red Rose."

Heifer Calf, under one year.

1. B. H. Bull, Brampton, "Fawn Kitty."
2. A. McLean Howard, Toronto.
3. Wm. Rolph, Markham, "Glen Rouge Rose."
4. J. H. Smith & Son, Highfield, "Gladys of St. Lambert."

Heifer Calf, under six months.

1. B. H. Bull, Brampton, "Chicora of Brampton."
2. J. H. Smith & Son, Highfield, "Lily of Highfield."
3. Wm. Rolph, Markham.
4. B. H. Bull, Brampton, "Merry Queen."

Four Calves under one year old, bred and owned by exhibitor.

1. B. H. Bull, Brampton.
2. J. H. Smith & Son, Highfield.
3. Wm. Rolph, Markham.
4. Mrs. E. M. Jones, Brockville.

Herd of one Bull and four Females over one year old, owned by exhibitor.

1. Mrs. E. M. Jones, Brockville.
2. Geo. Smith, Grimsby.
3. J. H. Smith & Son, Highfield.
4. Wm. Rolph, Markham.

Female of any age.

Wm. Rolph, Markham, "Belvoir Pet."

GUERNSEYS.

Bull, three years old and upwards.

1. Isaac Holland, Culloden, "Mary's Rosebery."
2. W. H. & C. H. McNish, Lyn, "Presto of Elm Grove."
3. J. N. Greenshields, Danville, Que., "Ontario's Pride."

Bull, two years old.

1. Isaac Holland, Culloden, "Dandy of Oxford."

Bull, one year old.

1. Wm. Butler & Son, Dereham Centre, "King of Oxford."
2. J. N. Greenshields, Danville, Que., "Isaleigh May Boy."

Bull Calf, under one year.

1. W. H. & C. H. McNish, Lyn, "Jesse James."
2. J. N. Greenshields, Danville, Que., "Isaleigh Venture."
3. W. H. & C. H. McNish, Lyn, "Tommy."

Bull of any age.

Isaac Holland, Culloden, "Mary's Rosebery."

Cow, four years old and upwards.

1. W. H. & C. H. McNish, Lyn, "Ada of Eastview."
2. J. N. Greenshields, Danville, Que., "Eliza C. 2nd."
3. J. N. Greenshields, Danville, Que., "May Queen 6th."

Cow, three years old.

1. W. H. & C. H. McNish, Lyn, "Belinda of Eastview."
2. W. H. & C. H. McNish, Lyn, "Udelta of Eastview."
3. J. N. Greenshields, Danville, Que., "Isaleigh Queen."

Heifer, two years old.

1. W. H. & C. H. McNish, Lyn, "Calanthe."
2. W. H. & C. H. McNish, Lyn, "Zell of Eastview."
3. W. H. & C. H. McNish, Lyn, "Linny of Eastview.

Heifer, one year old.

1. W. H. & C. H. McNish, Lyn, "Rosebud 2nd."
2. W. H. & C. H. McNish, Lyn, "Niphetos 2nd."
3. J. N. Greenshields, Danville, Que., "Isaleigh Duchess."

Heifer Calf, under one year.

1. Robert Moody & Son, Guelph, "Columbine 4th."
2. J. N. Greenshields, Danville, Que., "Isaleigh Buttercup."
3. W. H. & C. H. McNish, Lyn, "Adele of Eastview."

Herd consisting of one Bull and four Females over one year old, owned by exhibitor.

1. W. H. & C. H. McNish, Lyn.
2. J. N. Greenshields, Danville, Que.

Female of any age.

W. H. & C. H. McNish, Lyn, "Ada of Eastview."

HOLSTEINS.

Bull, three years old and upwards.

1. A. Hoover, Jr., Emery, "Emery Prince."
2. A. C. Hallman, New Dundee, "N. Statesman's Cornelius."
3. C. J. Gilroy & Son, Glen Buell, "Inka Kathleen's Son."
4. A. & G. Rice, Currie's Crossing, "Sipjke 3rd."

Bull, two years old.

1. G. W. Clemons, St. George, "Netherland Consul."
2. Ellis Bros., Bedford Park, "Sir Ruby Mascot."

Bull, one year old.

1. A. Hoover, Jr., Emery, "Barton Witzyde."
2. A. C. Hallman, New Dundee, "Flora's Sir Jacob."
3. McDuffee & Butters, Stanstead, Que., "Artis of Sunnyside."
4. A. & G. Rice, Currie's Crossing, "Sir Mackenzie."

Bull Calf, under one year.

1. A. & G. Rice, Currie's Crossing, "Sir Paul de Kols C."
2. G. W. Clemons, St. George, "White Prince."
3. A. C. Hallman, New Dundee, "Netherland Champion."
4. A. C. Hallman, New Dundee, "Caesar."

Bull of any age.

G. W. Clemons, St. George, "Netherland Consul."

Cow, four years old and upwards.

1. McDuffee & Butters, Stanstead, Que., "Trintji."
2. Ellis Bros., Bedford Park, "Maud Tensen."
3. C. J. Gilroy & Son, Glen Buell, "Oxford Jewel."
4. G. W. Clemons, St. George, "Lady Akkrum 2nd."

Cow, three years old.

1. G. W. Clemons, St. George, "Madge Merton."
2. A. Hoover, Jr., Emery, "Emery Beauty."
3. A. C. Hallman, New Dundee, "Polianthus Netherland."
4. A. & G. Rice, Currie's Crossing, "Lady Pieterge."

Heifer, two years old.

1. G. W. Clemons, St. George, "Inka Rose."
2. A. & G. Rice, Currie's Crossing, "Jewel Mercedes.
3. C. J. Gilroy & Son, Glen Buell, "Aagie Netherland."
4. A. & G. Rice, Currie's Crossing, "Daisy Jewel 2nd."

Heifer, one year old.

1. G. W. Clemons, St. George, "Mandamin's Daisy."
2. A. C. Hallman, New Dundee, "Abby Netherland."
3. C. J. Gilroy & Son, Glen Buell, "Ione J. 2nd."
4. Ellis Bros., Bedford Park, "Lady Amethyst."

Heifer Calf, under one year.

1. G. W. Clemons, St. George, "Queen de Kols Josephine M."
2. A. & G. Rice, Currie's Crossing, "Bright Promise."
3. R. S. Stevenson, Ancaster, "Ideal Lena."
4. A. & G. Rice, Currie's Crossing, "Tirrantia Mercedes Bell."

Herd of one Bull and four Females over one year old, owned by exhibitor.

1. A. Hoover, Jr., Emery.
2. McDuffee & Butters, Stanstead, Que.
3. Ellis Bros., Bedford Park.
4. A. & G. Rice, Currie's Crossing.

Bull and four of his progeny, any age, owned by exhibitor.

1. A. C. Hallman, New Dundee.
2. R. S. Stevenson, Ancaster.
3. A. & G. Rice, Currie's Crossing.
4. McDuffee & Butters, Stanstead, Que.

Female of any age.

G. W. Clemons, St. George, "Madge Merton."

FAT STOCK SHOW, GUELPH.

(Continued from page 96.)

GRADE SHEEP.

Ewe, two years old and over.

1. Jas Leask, Greenbank, "Betsy."
2. Gibson and Walker, Denfield, "Lady Bell."
3. David Beattie, Wilton Grove, Nan.

Wether, two years old and over.

1. John Rutherford, Roseville, "Dick."
2. John Rutherford, Roseville, "Douglas."
3. William E. Wright, Glanworth, "Collector."

Ewe, one year old and under two.

1. John Campbell, Woodville, "Grey Face."
2. T. E. Robson, Ilderton, "Lady Lee."
3. Richard Gibson, Delaware, "Minnie."

Wether, one year old and under two.

1. John Campbell, Woodville, "Sambo."
2. John Campbell, Woodville, "Santo."
3. Wm. E. Wright, Glanworth, "Gay Willie."

Three Ewes under one year.

1. Douglas Lillico, Jr., Ayr.
2. D. G. Hanmer & Son, Mt. Vernon.
3. T. E. Robson, Ilderton.

Three Wethers under one year.

1. John Campbell, Woodville.
2. John Rutherford, Roseville.
3. Gibson & Walker, Denfield.

Wether, under one year.

1. John Rutherford, Roseville, "Sam."
2. John Campbell, Woodville, "Perfection."
3. John Campbell, Woodville, "Paragon."

Ewe, under one year.

1. Douglas Lillico, Jr., Ayr, "Sister."
2. Wm. E. Wright, Glanworth, "Kitty."
3. D. G. Hanmer & Son, Mt. Vernon, "Faith Fenton."

Wether, any age.

John Rutherford, Roseville, "Dick."

Ewe, any age.

John Campbell, Woodville, "Grey Face."

GRADE SWINE.

Barrow, over nine and under eighteen months.

1. Robert Agnew, Acton, "Barney."
2. Robert Agnew, Acton, "Berry."
3. J. G. Snell & Bro., Snelgrove, "Great Expectations."

Barrow, nine months and under.

1. J. G. Snell & Bro., Snelgrove, "Fad."
2. J. G. Snell & Bro., Snelgrove, "Dick."
3. Samuel Congdon, Everton, "Harry,"

Sow, over nine and under eighteen months.

1. W. M. & J. C. Smith, Fairfield Plains.
2. P. McGarr, Guelph.

Sow, nine months and under.

1. Samuel Congdon, Everton, "Floss."
2. John Bolton, Armstrong's Mills, Dolly.
3. A. Hales, Guelph, Rosie.

Sweepstakes—Best grade hog of any age, breed or sex—Silver medal.

Robert Agnew, Acton, "Barney."

APPENDIX B.

GRADUATES OF THE ONTARIO VETERINARY COLLEGE, 1895.

Easter Examinations.

Allen, Leslie J ....Blue Mound, Kansas.
Armstrong, James H .....London, Ont.
Arnold, C. E.....Brant, Ohio.
Alyed, Jas. E.....Consecon, Ont.
Amey, Oscar J.....Ernestown Station, Ont.

Barrett, Forrest P.....Peterboro', N. H.
Bean, James A. .....Wellington, Ont.
Best, Llewellyn W. R....Sandford, Ont.
Bishop, S. P.....Greencastle, Pa.
Blackwell, Albert M.....Omaha, Neb.
Blinzley, J. F.....Norwalk, Ohio.
Bone, David R .....Paisley, Ont.
Bowers, Edward T .....Cedar Rapids, Neb.
Boyd, Henry ..... London, Ont.
Brandreth, O. E ..... Strathroy, Ont.
Broad, Charles E.....Nomence, Ill.
Broom, Thomas .....Blenheim, Ont.
Brossard, George J.....Fall River, Wis.
Burnett, D. Clifton .....Youngstown, Ohio.
Burns, Edward D .....Farmington, N. Y.
Burt, James H ....Lostwithiel, Cornwall, England.
Busman, Herman.....Cooperville, Mich.
Bettinger, Edward F.....Chittenango, N. Y.
Burdick, Ernest C.....Livonia, N. Y.

Carter, Harvey H .....Brookfield, Ohio.
Coates, John M .....Kearney, Mo.
Cook, Frederick W.....Jamesville, N. Y.
Coristine, Dillon.....Watford, Ont.
Cornell, Aaron .....Elkton, Mich.
Cotton, Frank B .....Grand Rapids, Mich.
Creighton, H. S.....Americus, Kansas.
Curtis, Bradford D.....North Attleboro, Mass.
Church, Dwight S .....Scranton, Pa.

De Bolt, Willard.....Union City, Ind.
Davis, Roy E .....Toledo, Ohio.
Dent, James ... .Milton, Ont.
Dodge, J. M..... Caro, Mich.
Douglas, Joseph A .....Blake, Ont.
Duffield, William F ..... Pittsfield, Ill.
Davis, J.....Decatur, Ill.

Eckert, Louis H .. . .Sebringville, Ont.

Farr, John W.....Jarvis, Ont.
Farrow, W. H. ....Auburn, Ont.
Fitch, George H ... .Claremont, N. H.
Fortune, George D .....Wingham, Ont.
Fotheringham, William...Grenfell, N. W.T.
Freeman, Arthur P ... . Barrie, Ont.

Galloway, James G. .....Uxbridge, Ont.
Gibbons, Augustine J ....Wingham, Ont.
Gibson, John G .....Alameda, N.W.T.
Gibson, S. Wells .....Cleveland, Ohio.
Gillin, H. M..... Ackley, Iowa.

Gokey, Francis W... ....Guelph, Ont.
Goodwin, Albert E . .....Hager City, Wis.
Graham, Robt. L.....Schomberg, Ont.
Grant, James .....Teeswater, Ont.
Grinnell, Lawrence A ....Grand Ledge, Mich.

Hackett, Joseph A .....Hockley, Ont.
Hackler, Henry H.....Pottstown, Pa.
Hamilton, Joseph .....Auburn, Ont.
Hamilton, William S .....Chelsea, Mich.
Handy, Edward T .....Onondaga, Mich.
Haney, William H.....Forest, Ont.
Harmon, Bernard.....Decorah, Iowa.
Hay, George A .....Campbellford, Ont.
Henry, Edwin M.....Oswego, Kansas.
Henhoeffer, Alfred S.....Strasburg, Ont.
Henry, Robert J .....Mono Mills, Ont.
Hill, Robert C .....Twin, Ohio.
Hill, W. Proctor.... .... Frederick, Maryland.
Hollenbeck, John B .....Rock Valley, Iowa.
Hollingsworth, Maurice A.La Salle, Ill.
Hood, David ....Alliston, Ont.
Hooker, Roy White .....Lowell, Mich.
Hoover, Benj. F. .....Davis, Ill.
Hynes, William R .....New York City.
Hensel, Hiram E.....Arcadia, Wis.

Inskeep, Charles E . .....Port Jefferson, Ohio.
Ireland, George .. .. Inglewood, Ont.

James, Albert W .. ..Toronto, Ont.
Jewell, John V .....Marcus, Iowa, U.S.
Johnston, John W.....Bath, Ont.

Klinck, J. M ..... Toronto.

Lake, William H .... .. Miami, Man.
Lee, Alexander O. .....Toronto.
Letham, John ... .Stonehouse, Scotland.
Loofborrow, Don J.... ...Mt. Sterling, Ohio.
Lipsett, Robert C ....Glenboro', Man.
Lipsett, George A .....Glenboro', Man.

Macdonald, Fred S. McA Dundas, P.E.I.
McKibbin, Robt. Webber.Buck Valley, Pa.
McNeal, Frank J.....Shickshinny, Pa.
McNeal, Harry T .....Shick hinny, Pa.
McNeely, W. Albert .....Green River, Ont.
McPherson, Colin .....Glanworth, Ont.
McKay, John ....Duluth, Minn.
McKercher, Donald ..... Petrolea, Ont.
Markham, Fred. De Witt. Port Leyden, N. Y.
Megowan, Claude L .....Sacramento, Cal.
Mertz, Peter J ..... Virginville, Pa.
Milne, Richard A ....Don, Ont.
Moore, J. J ....Corning, Iowa
Myers, George F.....Danville, Ill.
Myers, Henry H.....Youngstown, Ohio.
Moody, Alfred A .....Guelph, Ont.
Morris, William M... ...Cass City, Mich.

GRADUATES.—*Concluded.*

Nicholson, William.....Pittsburg, Pa.
Nickell, Robert R .....Limehouse, Ont.

Oatway, W. H.....Chicago, Ill.

Peat, Daniel George .....Plainville, Ont.
Perdue, Albert M .....Wingham, Ont.
Phelan, Richard M .....Greenville, Pa.
Pick, Walter R .....Columbus, Wis.
Pugh, William T .....Grafton, N. Dakota.

Rafter, Edward .....Hamburg, N. Y.
Ratz, G. G .....Red Bud, Ill.
Roche, Charles M .....Cork, Ireland.
Roets, Peter J.....Monches, Wis.
Riddle, Henry C.....Waterloo, Ont.

Saxton, J. R .....Strathroy, Ont.
Sexton, M. S .....Minneapolis, Minn.
Shaw, Arthur L.....Mt. Upton, N. Y.
Shepard, Franklin Gifford.North Evans, N. Y.
Stanley, Wm. Morris.....Guelph, Ont.
Stebbins, Henry D .....Westmoreland, N. Y.
Stener, W. Oscar H .....New Haven, Conn.
Stewart, Archibald D .....Ailsa Craig, Ont.
Stewart, James. .....Ailsa Craig, Ont.
Sweeney, Thomas M.....Richmond, Va.
Stiver, M. B.....Mount Albert, Ont.

Tancock, James A..... London, Ont.
Thompson, James W. ... Cameron, Mo
Thomson, J .....Clinton, Iowa.
Tucker, George P .....Lincoln, Neb.
Taylor, Horace Bruce ....Nicholasville, Ky.
Turley, Cæsar Augustus ..Brandon, Man.

Vans Agnew, Ernest Geo.Fulda, Minn.
Vans Agnew, Frank.....Rochester, Minn.
Vans Agnew, Robert..... Fulda, Minn.
Vorhis, Edward F.....Ithaca, N. Y.

Waghorn, Thomas G.....Kirkton, Ont.
Waldo, Duran M.....Grand Ledge, Mich.

Ward, Edward K.....Guilford, Ind.
Welch, John .....Strathroy, Ont.
Welch, William W.....Elgin, Ill.
West, William Lincoln ...Ellsworth, Maine.
White, Allan S .....Glenallan, Ont.
Wingerter, Joseph.....Akron, Ohio.
Witmer, Hervey W.....Greencastle, Pa.
Wooding, Clarence D.....Waterbury, Conn.
Wright, Alexander H.....Columbus, Wis.
Waterman, Frank W.....Providence. R. I.
Weesner, Macy.....Fort Wayne, Ind.
Wilson, Fred. A..... Toronto, Ont.

Young, Amos W .....North Liberty, Ohio.
Young, David F.....Alameda, N.W.T.

Christmas Examinations.

Currie, Donald .....Stayner, Ont.

Duncan, Francis.....Unionville, Ont.

Farquhar, John M .....Greenock, Scotland.

Gore, Truman Earl .....Clarksburg, W. Va., U.S.

Howell, Cecil .....London, Ont.

Jones, John S .....Poland, N. Y., U.S.

Kann, R. L .....Lisburn, Pa., U.S.

McArthur, Archie A.....Stayner, Ont.

McDonald, Allan .....Erin, Ont.
McDonald, Angus .....Teeswater, Ont.
McGregor, John J.....Carleton Place, Ont.
Miller, Arthur E .....Myersville, Ohio, U.S.

Powers, James H .....Providence, R. I., U.S.

Reid, David D .....Teeswater, Ont.
Rouse, William J.....Mitchell Square, Ont.

Soper, Daniel Henry .....Warrensville, Pa., U.S.

Wagner, Jacob, jr .....Tavistock, Ont.
Wisman, E. C.....Bryan, Ohio, U.S.

APPENDIX C.

TREASURER'S REPORT.

The Treasurer in account with the Agriculture and Arts Association for the year 1895.

Receipts.

			To balance from 1894		$3,374 33
			Registration fees		2,238 75
			Fat Stock Show.		
January	18th,	1895.	Special Prize Packing Co	$ 25 00	
			Shropshire Association	152 00	
Dec.	11th,	"	Dominion Fat Stock Association (special)	30 00	
			J. W. Wheaton special prize (special list)	10 00	
"	12th,	"	Gate receipts at Fat Stock Show	192 75	
			Grant from Sheep Breeders' Association	300 00	
			" Swine " "	225 00	
"	17th,	"	Entry fees at Fat Stock Show	442 25	
"	30th,	"	Western Dairymen's Association	50 00	
			Sun Publishing Company	10 00	
			Swine books for December	18 05	
			Swine Breeders' Association on acct'	60 20	
			Ayrshire Association (special)	25 00	
					1,540 25
January	15th,	1896.	Special prize from Shropshire Sheep Breeders' Association.		98 00
"	15th,	"	From sale of safe		80 00
			Dairy Show.		
Sept.	28th,	1895.	Grant from County Council of Leeds and Grenville	$300 00	
			Gate receipts at show	295 10	
October	3rd,	"	Com. on receipts of side-show	4 00	
			Grant from Town of Gananoque	100 00	
			Entry fees	174 25	
			Privileges sold	17 00	
			Creamery special	50 00	
			Eastern Dairymen's Association (special)	50 00	
			Derbyshire & Co. for shafting sold at close of show	20 00	
					1,010 35
			Herd Books Sold.		
February	14th,	1895.	To cash for sales	$ 4 45	
Nov.	30th,	"	To 235 Swine records	371 75	
			Clydesdale books	42 75	
			Ayrshire books	21 59	
					440 54
			Interest.		
August	7th,	1895.	To interest on Prince of Wales' mortgage	$24 00	
Dec.	1st,	"	" " "	24 00	
					48 00
			Insurance.		
March	25th,	1895.	To North British Insurance Co., on building	$5,000 00	
			" " contents	2,500 00	
April	8th,	"	Norwich Union, on building	5,000 00	
					12,500 00

TREASURER'S REPORT.—*Continued.*

Horse Show.

April	19th,	1895.	Cheque for gate receipts on 18th	$ 564 25	
"	20th,	"	" " 19th	2,015 25	
"	22nd,	"	Deposited in bank per H. Wade	2,251 05	
"	26th,	"	Grant from Toronto City Council	500 00	
"	30th,	"	Proceeds of Horse Show (additional)	4,493 20	
May	4th,	"	Brown Bros.' account	3 75	
			" postage	11 50	
			Mail Job Printing Co. account	12 25	
			Hackney Horse Society (special premiums)	295 00	
			Entrance fees, Can. Horse Show	102 00	
			Hunt Club (special from Clydesdale Association)	100 00	
					10,348 25

Government Grants.

April	26th,	1895.	Prov. Treasurer's cheque	$2,000 00	
Sept.	30th,	"	" "	2,600 00	
Dec.	10th,	"	Cheque for amount equal to rent due at time of fire	666 00	
					5,266 00
					$36,944 47

Supplementary.

January	16th,	1896.	From Swine Breeders' Association	$46 91	
			" Sheep "	86 00	
			Andrew Pattullo (special)	15 00	
			Bryant Press	15 00	
					162 91
					$37,107 38
			Order-in-Council passed in December, not yet received		2,400 00
			Total receipts, present and prospective		$39,507 38

DISBURSEMENTS.

			Postage		$386 89

Salaries.

			H. Wade, Secretary	$1,500 00	
			W. F. Stewart, clerk	600 00	
			J. W. Nimmo, stenographer	540 00	
			J. I. Hobson and Wm. Dickie, auditors, each $15	30 00	
			J. Sissons, attending meeting of auditors	9 60	
			Charwoman	98 00	
			D. Kirkwood, Treasurer	125 00	
					$2,902 60

Fat Stock Show.

Printing.

January	8th,	1895.	Printing and advertising for show of 1894	$110 50	
February	5th,	"	P. E. W. Moyer, advertising in 1894	5 00	
January,		1896.	The *Mail* Printing Co. for catalogues, etc	56 25	
			The *Mercury* Office for prize lists, bills and advertising	67 08	
			General advertising in several papers	88 98	
					327 81

Judges' Fees.

Dec.	12th,	1895.	Amount paid judges for services at Fat Stock Show as detailed, folio 101, cash book	$85 28	
					85 28

TREASURER'S REPORT.—*Continued.*

Special Prizes awarded in 1894.

January	17th,	1895.	Special prizes paid, folio 43, C. B	$86 00	
		"		41 00	
		"	John Campbell	50 00	
					177 00

Prizes of 1895.

Dec.	12th,	1895.	Prizes paid as detailed, folios 103 and 105, C. B	$2,514 00	
		"	Dairy Department	89 00	
		"	specials of 1895	25 00	
					2,628 00

Poultry Association.

"	12th,	1895.	Per Jas. Millar, percentage of gate receipts	$45 00	
					45 00

Swine Breeders' Association.

"	12th,	1895.	Per F. W. Hodson, refund of proportion of prize money, 1895	$22 89	
"	12th,	"	" " " " 1894	50 00	
					72 89

Fat Stock Show Committee.—Expenses.

January	17th,	1895.	Committee expenses, meeting at Guelph	$ 78 28	
May	23rd,	"	" " " "	32 40	
June	22nd,	"	" " " "	117 24	
Sept.	25th,	"	" " " "	23 12	
Dec.	12th,	"	" " " "	20 00	
					$271 04

Fat Stock Show.—Miscellaneous Expenses.

Dec.	12th,	1895.	Railway fare of Secretary and assistants to and from Guelph, Secretary's bill and extra to clerks	$ 30 00	
			Expenses of Secretary's assistants and Treasurer, and Treasurer's railway fare	12 55	
			Pay list of General Superintendent and assistants	45 25	
			A. Congalton, keeper of door whereby stock was entered and removed	5 00	
					92 80
			F. W. Hodson, for Sheep Breeders' Association	$114 00	
			" Swine " "	95 00	
					209 00

Office Expenses.

January	5th,	1895.	Consumers' Gas Company	$ 11 66	
			Bell Telephone Co	22 50	
April	—th,	"	Alexander & Cable, lithographing and binding cheques	5 00	
			Jas. Bain & Son, letter heads and envelopes	6 00	
			Chas. M. Edwards & Co, gum mucilage	2 00	
			C. Cripton, dating stamp and pad	5 00	
			Standard Fuel Co, two tons coal	10 25	
			Consumers' Gas Co.	4 20	
			Brown Bros., for caligraph writer and other goods, cartage, etc., and trunk	174 25	
April	24th,	1895.	Office Specialty Co., for goods	3 10	
			G. N. W. Telegraph Co., for telegrams	2 84	
May	11th,	"	Paid for cartage and twine	7 35	
"	11th,	"	P. Maher, $3.00; Fleming Estate, $2.00	5 00	
			Office expenses	7 50	
June	11th,	"	Davidson and Barton, $6.00, door plate, 60 cents	6 60	
"	22nd,	"	J. S. Laughlin, Stenographer	20 00	
July	3rd,	"	Sundries for office	7 21	

TREASURER'S REPORT.—*Continued.*

Office expenses.—Continued.

July	6th,	"	Consumers' Gas Co.	2 00	
			Bell Telephone Co	22 50	
August	30th,	"	Telegrams, etc	10 91	
October	14th,	"	J. & J. Taylor, for opening safe	70	
"	23rd,	"	Alexander & Cable	4 00	
			Jas Bain & Son, letter heads	4 00	
"	30th,	"	Sundries for office	8 76	
			Toronto Furnishing Supply Co., double desk (oak)	48 00	
			Directors' table, oak, $25.00; office chair, $8.00	33 00	
Nov.	25th,	"	J. & J. Taylor, moving safe	3 70	
			Office Specialty Manufacturing Co., binding case, $2.25; copying paper, $1.50	3 75	
			Davidson & Barton, two oak desks, $13.00 each	26 00	
			" " twelve chairs, $1.25, $15.00; six arm chairs, $12.00	27 00	
			One oak table, $10.50; flat desk, $4.00	14 00	
			Two book shelves, $2.60; 2 pigeon-hole cases, $8.00	10 60	
			Drawing two loads	1 40	
January	8th,	1896.	R. Walker & Son, carpeting	77 38	
			Office Specialty Manufacturing Co., for oak book case	18 00	
					616 16

Printing and Stationery.

January	8th,	1895.	Jas. Bain & Son, for paper	$ 7 50	
"	17th,	"	Brown Bros., account to 31st December	14 65	
Februa'y	23rd,	"	James Bain & Son, letter heads	4 50	
March	27th,	"	The *Mail* Job Co., for forms and envelopes	12 25	
			" " 1,000 printed envelopes	3 00	
			Evening *Star*, tenders for printing	1 00	
"	27th,	"	Hunter, Rose & Co., Lancashire In. Co. cheque books	16 00	
			Paid for cheque books returned	10 00	
April	11th,	"	Evening *Telegram*, advertising tenders	1 10	
June	22nd,	"	The *Mail* Printing Co., envelopes	8 25	
			Shepherd Bros., printing pedigree certificates, forms, envelopes, etc., etc	10 00	
July	18th,	"	Brown Bros., printing and office supplies	22 38	
			Mail Printing Co., 1,000 envelopes	3 00	
August	30th,	"	Shepherd Bros., entry forms and certificates	14 25	
			Office Specialty Co., badge case	40	
Sept.		"	The *Mail* Job Printing Co	29 25	
October	19th,	"	Brown Bros., several small bills, pens, pencils, paper forms, etc., etc	22 75	
Nov.	23rd,	"	Brown Bros., for goods	30 10	
January		1896.	The *Mail* Printing Co., half of account	56 00	
			The Hunter, Rose Publishing Co., for stud books	352 80	
			Brown Bros, for stationery	9 10	
					628 28

Library Account.

January	8th,	1896.	The Might Directory Co	$ 7 50	
February	5th,	"	Brown Bros., for binding Gazetteer, Live Stock Journal, Journal Royal Agricultural Society, Breeders' Gazette, etc, etc	13 50	
April	11th,	"	G. W. Green, for several volumes Herd Book	9 00	
			H. Wade, for books burned in late fire	11 00	
July	6th,	"	E. F. Euren, for vols. 6, 7 and 8, and freight	26 36	
			Albert Britnell, for transactions of Board of Upper Canada, and Annual Report of Committee of Agriculture, 24 volumes	11 50	
October	30th,	"	The Canadian *Sporting News*	2 00	
Nov.	23rd,	"	For library, per H. Wade	9 50	
					90 36

Miscellaneous.

January	9th,	1896.	Telegrams, express charges, ink eraser, stamp, etc	$ 9 40	
"	23rd,	"	Bank of Commerce to retire cheque given to John Abel in 1880 (1550)	45 00	
March	8th,	"	Digging out records after fire	6 00	
"	27th,	"	Jonathan Sissons, committee *re* Veterinary Department	17 00	

TREASURER'S REPORT.—*Continued.*

Miscellaneous.—Continued.

April	11th,	"	Barber & Ellis, amount of bill	1 70	
			Rent of two boxes at Horse Show	50 00	
June		"	Moss, Barwick & Franks, advertising sale of lot and other legal expenses connected therewith	74 48	
July	25th,	"	Part of expense of trip to North-West by President	160 00	
			Moss, Barwick & Franks, legal services	75 00	
			Freight, telegrams, water rates, etc	17 90	
Nov.	30th,	"	W. A. Murray, for ribbons	31 51	
Dec.	12th,	"	H. J. Sissons, disbursements and travelling expenses, *re* special report to be published	25 00	
"	30th,	"	Secretary's expenses to Guelph and return, *re* Fat Stock Show	3 50	
			Telegrams and cartage	1 00	
"	12th,	"	To expense of banquet	25 00	
January	5th,	"	Sundry supplies for Treasurer's office	2 00	
					544 49

Council and Committees Expenses.

January	8th,	1896.	N. Awrey, delegate to Eastern Dairymen's Association	$ 29 76	
February	14th,	"	Jas. Rowand, attending Central Farmers' Institute	23 84	
March	8th,	"	Council expenses, annual meeting, $158.16; W. C. Edwards, $26.80	184 96	
			Jonathan Sissons, on committee, $9.04; J. C. Snell, $9.60	18 64	
April	11th,	"	Committee meeting expenses, $96.72; members' fees at Horse Show, $309.72	406 44	
May	3rd,	"	N. Awrey, attending committee meetings	21 60	
			Committee on Horse Show	46 36	
October	3rd,	"	Members' fees, attending Dairy Show	335 76	
Dec.	12th,	"	Members' fees, attending Fat Stock Show	233 44	
"	30th,	"	Council meeting, expenses	76 72	
					1,377 52

Interest.

January	8th,	1895.	John I. Hobson, for Miss Loghrin, due 22nd January	$ 300 00	
April	8th,	"	" " "	200 00	
"	8th,	"	Discharge of mortgage	6 00	
					506 00

Retiring Mortgage.

April	8th,	1895.	John I. Hobson, for Mary Jane Loghrin	$10,000 00	
					10,000 00

Furniture and Building Repairs.

January	8th,	1895.	E. H. Roberts, repairing locks	$ 1 25	
February	23rd,	"	J. T. Aggett, repairing water pipes	3 90	
March	27th,	"	Office furniture	10 00	
"	27th,	"	Wm. Weir, repairs	6 00	
"	27th,	"	A. R. Ruttand, two window shades	11 00	
"	27th,	"	Keith & Fitzsimmons, repairing water pipe	1 75	
April	11th,	"	R. Keys, repairing pipes	1 55	
			McDonald & Wilson, one cash box	3 50	
			Office Specialty Man'f'g Co., one copier and merchandise	26 50	
			Fleming Estate, rent to April 1st	20 00	
May	1st,	"	" " " until May 1st	20 00	
"	13th,	"	Repairing, repainting and cartage of safe	105 90	
			Fleming Estate, rent	120 00	
					331 35

Medals and Diplomas.

February	23rd,	1895.	John Wanless & Co., medals for Fat Stock Show	$ 9 00	
			" " " Veterinary College	18 00	
March	27th,	"	Alexander & Cable, lithographing 200 diplomas	120 00	
					147 00

TREASURER'S REPORT.—*Continued.*

Herd Books.

February	23rd,	1895.	The *Mail* Job Printing Co., cards, forms and S. records....	$19 75	
March	27th,	"	George Pepper, for herd books.....	6 00	
			W. H. Millinan, for 16 Vols. Clydesdale and 3 Shire.....	29 00	
August	24th,	"	Shepherd Bros., printing pedigree certificates	12 25	
May	11th,	"	The Murray Printing Co., for herd book	350 00	
"	13th,	"	The *Mail* Job Printing Co.....	6 00	
June	22nd,	"	Hunter Rose & Co., 30 Vols. 6 Clydesdale.....	153 00	
July	6th,	"	The Murray Printing Co., 300 copies Vol. 3, 500 copies Vol. 4, Swine Breeders' record	606 00	
			Printing Vol. 2 Ayrshire herd book, supplying wrappers and binding two volumes for office.....	303 25	
October	9th,	"	The *Mail* Job Printing Co.....	10 00	
Dec.	20th,	"	F. A. Fleming, for herd book	16 00	
					$1,511 25

Dairy Show.

August	30th,	1895.	Postage.....	$21 00	
					21 00

Dairy Show, Miscellaneous.

Sept.	30th,	1895.	Simpson and Eaton, for ribbons.....	$12 73	
October	9th,	"	H. Wade, telegrams, bill posting, hotel bill, etc.....	19 16	
			James Galloway, for use of engine	10 00	
"	30th,	"	John Wanless & Co., silver and bronze medals.....	24 00	
					65 89

Committee's Expenses.

May	11th,	1895.	Committee's pay list.	$127 32	
July	18th,	"	" "	25 50	
"	25th,	"	" Joshua Legge.....	7 00	
August	23rd,	"	" pay list.....	142 12	
					301 94

Dairy Show Prizes.

October	3rd,	1895.	Prizes paid as entered on folios 89 and 91 cash book.....	$2,246 00	
					2,246 00

Dairy Show, General Expenses.

October	3rd,	1895.	Tye, for ice	$ 7 40	
			Gate-keeper's pay list	21 00	
			Superintendent's pay list	51 65	
			Attendants, "	42 00	
			T. Webber, bill posting, $2; Wm. Rogers, wood $2	4 00	
			Joshua Legge, for services.....	40 60	
			D. J. Lloyd, livery hire, two bills.	11 00	
			Rent of furniture.....	7 50	
			Watt Bros., for shafting, etc.....	37 18	
			Expenses of Secretary and Treasurer and their assistants...	75 56	
			Straw, $48; paid Battoms for Band, $25	73 00	
			Chas. H. Brennan, cab hire	12 00	
			Bennett & Son, hardware.....	23 35	
			Rathbun, for lumber	32 30	
Dec.	12th,	1895.	J. Legge, for boxing, cartage and shipping of cheese returned.	13 00	
					451 54

Judges.

			Amount paid Dairy Show Judges	$137 35	
					137 35

TREASURER'S REPORT.—*Continued.*

Dairy Show Printing and Advertising.

Sept.	6th,	1895.	Freeman Britton, printing prize lists	$60 00	
October	3rd,	"	Printing, bill posting and advertising (Fo. 91, C. B.)	59 00	
			The *Mail* Printing Co., forms and envelopes	15 00	
"	9th,	"	T. G. Hart, advertising	5 00	
August	30th,	"	The *Mail* Printing Co., 2,000 half sheet bills, two colors	25 00	
October	9th,	"	Freeman Britton, printing, (Fo. 93, C. B.)	47 55	
"	23rd,	"	Advertising in Live Stock and Farm Journal	6 48	
"	23rd,	"	The *Globe* Printing Co., for advertising	8 40	
"	23rd,	"	" " "	3 00	
					229 43

Plowing Matches.

October	19th,	1895.	Four divisions, each $150	$600 00	
					600 00

HORSE SHOW EXPENSES.

Committee's Expenses.

February	23rd,	1896.	Paid members for attendance at meeting (Fo. 51, C. B.)	$51 68	
					51 68

Judges.

April 19th and 29th		1896.	Paid judges, by Agriculture and Arts Association (Fo. 51, C.B.)	$139 65	
					139 65

Miscellaneous.

April	8th,	1896.	Postage and petty cash	$9 15	
			H. Wade, preparing papers and expenses	42 00	
			D. Kirkwood, Treasurer, extra services	25 00	
					76 15

Prizes.

April 24th and 29th		1896.	Prizes paid by Hunt Club	$2,220 34	
			Paid by Agriculture and Arts Association	1,705 00	
					3,925 25

Horse Show, General Expenses.

Including wages, badges, petty expenses, catering, fitting up armory, tent hire, stenographing, fittings, telephones, moving furniture, etc	$1,868 79
Stationery, printing, advertising, bill-posting, etc	889 29
Engineering, insurance, ticket selling, music, decorating, refreshments, hardware, repairs, etc	1,007 55
Salaries	550 00
Donations to furnish mess room	500 00
Percentage of gate receipts paid Hunt Club	1,968 25

TREASURER'S REPORT.—*Concluded.*

Supplementary.

January 16th, 1896.	Daniel Rose, printing and binding swine records	$566 50	
	H. Wade, extra for services since 1st January on swine record	69 50	
	D. Kirkwood, error in settlement	12 00	
	A. Laidlaw, advertising Fat Stock Show, 1894	4 00	
	J. I. Hobson and Wm. Dickie, auditors, each $15	30 00	
	John Rutherford, Fat Stock Show, special prize	25 00	
	W. E. Wright, " "	23 00	
	W. A. Beattie, " "	6 00	
	Richard Gibson, " "	10 00	
	John Campbell, " "	34 00	
			780 00

Executive Committee's Expenses.

	J. C. Snell	$10 08	
	J. Sissons	13 60	
	A. Rawlings	24 00	
	R. McEwen	18 16	
	J. Legge	22 64	
			88 48
	H. J. Sissons, for preparing Association's report of last fifty years, (balance)	$135 00	
			135 00
	Total payments time of audit		$38,982 96
	Total receipts, present and prospective		39,507 38
	Balance on hand		524 42

Payments since Audit.

	Cheque to H. Wade, for book, telegram and express	$ 5 73	
	J. Legge, for Gananoque	235 00	
	Treasurer for extra services, (per resolution)	25 00	
			265 73

January 17th, 1896.

D. KIRKWOOD,
Treasurer.

To the Council of the Agriculture and Arts Association:

GENTLEMEN,—We, your Auditors, beg to report that we have examined the Treasurer's books, accounts and vouchers for 1895 and 1896 and find them correct. All of which is respectfully submitted.

WM. DICKIE,
JOHN I. HOBSON, } Auditors.

APPENDIX D.

A HISTORY OF THE AGRICULTURE AND ARTS ASSOCIATION.

We have to consider, briefly of necessity and in an inadequate manner, the history of an Association which has been intimately connected with the progress of the most important industry in this Province almost since that progress first began—an Association which, growing as it did out of the necessities of agriculture itself, and begun as it was by the efforts of a few enlightened and enterprising agriculturists, has throughout its history been enabled to take up and carry forward new ideas and new lines of work as the necessity for these arose in the interest of that industry.

We shall find our work resolve itself in a more or less definite way into four periods. The first of these covers the formation of the Agricultural Association and its proceedings up to the end of the year 1850, in which a Provincial Board of Agriculture was established by the Government, which Board was to act as council of the Association together with performing certain other extensive duties. During this first period the Association established an annual Provincial Exhibition, and set on foot certain co-operative ventures, such as the joint purchase of seeds and stock.

The second period lasts from 1851 to 1867. During this time the Board of Agriculture, or the Board of Agriculture and Arts as it became known after its association with the Arts Societies, was practically the sole general executive body that agriculture possessed in the Province, and its duties were very extensive, the Government of the United Provinces having little to do directly with agriculture, but leaving it almost entirely to the Board.

After Confederation one of the Ministers was also styled Commissioner of Agriculture, and some of the important duties of the Board were taken over during the third period. The great proportions to which the Provincial Exhibition had grown, and the success which from year to year attended it, resulted in the later years of this period in the establishment of great permanent fairs in those cities which had been frequented by the Provincial, which as they, too, grew in magnitude, did away with the necessity for the latter.

From the year 1881 we find the Board renewing its energy and giving its attention to several other important matters. Good husbandry was encouraged by giving prizes for farms, after the abandonment of the Provincial Fair, and Stock and Dairy Shows were established. The chief work of this period however has been the registration of stock, a department which has been extensively developed as pure-bred stock increased in the country.

Part I. Agricultural Association, 1846-1850.

In or about the year 1825 a local agricultural society was established by some energetic farmers in what was then known as the Home District, embracing the present counties of York, Peel, Ontario and Simcoe. Of course, covering as it did such an extent of territory, this organization could at best embrace but a very few of the farmers in the district, but it was a step in the direction of agricultural organization, and opened the way for the formation of further societies on the same plan. It would be interesting to study the history and proceedings of this pioneer society, but even were such an investigation within the scope of this necessarily brief history, it would be almost impossible owing to the obscurity in which the transactions of these early societies are involved.

After this organization, societies constructed on the same principles were gradually established in a few of the other districts, but the way in which the early settlers were scattered, the inadequate means of communication between the settlements, and the unceasing toil which was demanded by pioneer farming, as well as the difficulty of procuring funds to carry out the objects of the associations, necessarily prevented the movement from making rapid progress. However as the advantages of such a movement became apparent, it was not long before the Legislature came to the assistance of those who were thus endeavoring to promote agricultural improvement. By a Provincial Act of the year 1830, 11 Geo. IV, cap. 10, the terms of which give us some insight into the objects of these societies which it proposed to assist, it is provided, "That when any Agricultural Society for the purpose of importing valuable live stock, grain, grass seed, useful implements or whatever else might conduce to the improvement of agriculture in this Province, shall be established in any district of the said Province," etc., if £50 should be raised annually by such Society for such purposes, it might be supplemented by an annual Government grant of £100.

This Act was to last for five years. It was found to be fairly effective in furthering the formation of these societies, and was substantially re-enacted in 1835 by 5 William IV., cap. 11. Upon the lapse of this Statute a new enactment, 7 William IV., cap. 23, made more efficient provision for the establishment of these associations in the poorer districts by granting, instead of the definite amount of £100 where the subscription was over £50, double the amount that might be subscribed by each society respectively provided the grant should not exceed £200 for each district. By this means Societies which were too weak to raise £50 annually were still enabled to receive a grant, and it was made possible for each district to secure its full allowance of £200, by the formation of County Societies within its districts with an aggregate subscription of £100 or over for the district.

After the union of the Provinces in 1840 renewed enactments continued in force the above grants, amendments made from time to time increasing the amount which might be secured by each district as population grew and county societies multiplied and increased their membership. The constitutional changes which followed the union gave the agricultural classes an increased influence in affairs of State, and many able and energetic farmers began to come to the front in politics. A monthly agricultural journal, styled the "British American Cultivator," published by W. G. Edmundson, made its first appearance about this time. Under his able and aggressive management it made its influence felt from the first as an active force in the cause of agricultural improvement and advance, both publishing in concise and readable form the results of the most intelligent agricultural researches and inventions, and taking an active interest in the workings and progress of the various agricultural societies. One must regret that the early issues of this journal are not more easy of access.

It would seem that in the columns of this journal was first publicly urged the necessity of the next step in advance—the formation of a Provincial Association. It must have been felt that among the farmers at large through the Province there was the same want of communication as had formerly existed among even those who were near neighbors, prior to the formation of district agricultural societies. Pursuing their objects singly and diversely, the usefulness of these societies was checked and restricted in many ways through the want of adequate means of information, and their diversity was such that no considerable progress was possible in any general way. Each little society held from year to year its own meetings and its own fair, the gradual improvements and new ideas slowly worked out in each community had to work their way quite unaided by hints from those who were independently going through the same processes in other parts of the Province; the scanty revenues which each society raised for the purchase of seeds and improved tools were laid out at a great disadvantage, and their insufficient means could offer but paltry inducements in the way of premiums to encourage progressive men to venture on the dangerous and expensive experiment of importation, in order to improve the stock of the country.

Such considerations could not but actively engage the attention of those who looked for some united efforts in the direction of agricultural development. Their ideas were vigorously urged in the columns of the *Cultivator*, and in the fall of 1843 a meeting was called in Toronto to discuss some sort of united action. The delegates to this convention seem to have been unanimous in favoring the reconstruction of the local societies on a uniform basis, and the formation of a Provincial Association to bind these together, to collect and publish information of general utility, and generally to guide and control the interests of agriculture in the Province as a whole. It was considered that the movement should come through the county societies, that the central machinery should grow out of them, rather than seem to be imposed upon, so that the system should act without friction and as a harmonious whole.

It would appear, however, that public opinion was not yet educated to the necessity of this project, for the meeting was barren of immediate results, as also were the efforts of the two succeeding years, during which the agitation was continually kept up to a greater or less extent. Still it was only a question of time and the idea made its way slowly but surely as do all movements which demand an attention on the part of those who further them, quite unselfish and disinterested. The renewed friendly relations with the people of the United States permitted the appreciation by Canadians of many excellent institutions which had developed there, and Canadian farmers who resided near the border began to visit in large numbers the great fairs held by the Agricultural Association for the State of New York, which had existed since 1832, bringing back and spreading abroad glowing reports as to the splendid quality of the stock and the wonderful labor saving inventions there exhibited. More distant societies began to send delegates to these fairs, reports were published and public interest grew apace.

Accordingly when the question of the formation of such an association in Upper Canada was again brought forward, its promoters succeeded in carrying it to a successful issue. The formal proposal came direct from the most flourishing of the local societies in the Province, that of the home district. At a meeting of this society in the spring of 1846, the following resolution introduced by E. W. Thomson, Esq., the President, was carried unanimously :

Resolved, " That this Society is of opinion that the cause of agricultural improvement would be greatly promoted through the agency of a Provincial Agricultural Society, and in order that the various agricultural societies in Canada West should have a voice in its proper organization, this Society is of opinion, that a meeting of delegates from each of the general and local agricultural societies should be called at the earliest possible opportunity, and in order to carry this object into effect that G. D. Wells, Esq., W. B. Crew and W. G. Edmundson, form a committee to appoint a period and place of meeting, and also to open a correspondence with the several agricultural societies in Canada West, soliciting their co-operation in the proposed general organization."

In accordance with this resolution a meeting was held at the Court House, in Toronto, in July of the same year. It was decided that a society should be formed consisting of all persons who should pay a certain annual subscription, or a lump sum to entitle them to life membership ; that the governing body should consist of two delegates from each district society, and that an annual fair should be held. A meeting for organization was called for the 16th of August at Hamilton. This meeting was numerously attended by prominent agriculturists from the Province at large, and especially from the surrounding district. E. W. Thomson, Esq., of York Township, was chosen chairman, and W. G. Edmundson, the publisher of the *Cultivator*, secretary. A committee appointed to draft a constitution reported the following, which was adopted by the meeting, and in which the primary aims and objects of the Association are simply and clearly set forth :

1. That the Association be called the " Provincial Agricultural Association and Board of Agriculture for Canada West."

2. That the members of the Association be composed of persons subscribing annually to the amount of five shillings and upward.

3. That those persons who shall subscribe to the amount of two pounds ten shillings and upwards shall be constituted life members of the Association.

4. That the Association shall be governed by delegates sent by the several district agricultural societies, who shall meet annually for the election of officers and the transaction of the business of the Association, and in case no such delegates are appointed, then the presidents and secretaries of such societies to be ex-officio delegates.

5. That the delegates shall elect their president, two vice-presidents, secretary and treasurer at their meeting, who shall hold office until the election of their successors at the annual meeting, which shall be held on the day preceding the show, at 10 o'clock a.m., when the said officers shall be elegible for re-election.

6. That the funds of the Association be raised by subscriptions of the members of the Association, voluntary subscriptions, and such funds from the various agricultural societies, as by them may be appropriated, and any grant which may hereafter be obtained from the Government by application through Parliament.

7. That the objects of the Association shall be improvement of farm stock and produce, the improvement of tillage, agricultural improvements, etc., and the encouragement of domestic manufactures, of useful inventions, and generally of every branch of rural and domestic economy.

After the constitution had been formally adopted, officers were chosen to act until the first annual meeting. They were: President, E. W. Thomson; Vice-Presidents, John Wetenhall and Sheriff Ruttan; Secretary and Treasurer, W. G. Edmundson. It was resolved that the first exhibition should be held at Toronto in October, and a committee of management was chosen comprising, besides the officers of the Association, several prominent citizens of Toronto and agriculturists in the surrounding district. After deciding to circulate a report of its proceedings among the district societies, requesting them to take an active interest in the new movement, the meeting adjourned.

In making the preparations for and carrying to a successful issue the first considerable exhibition held in the Province, the committee had on hand a task by no means easy, and the success which attended their efforts affords the highest tribute to the energy and ability of its members. The preparation of the prize list required much judgment, as the means of the Association were necessarly limited. However, the way in which the premiums were apportioned seems to have given general satisfaction. In furtherance of one of the chief aims of the Association, the improvement of stock, the largest prizes were assigned for male animals. Among the prizes offered were £10 for the best stallion and £17 10s. for the best bulls in different classes. Premiums were also given for farm and garden products, agricultural implements, manufactures and art specimens. A special prize of £25 was given by the Canada Company for the best twenty-five bushels of wheat, the exhibit winning the prize to be distributed as seed by the Association. This generous donation was continued annually for many years The second prizes consisted for the most part of valuable agricultural works, and as third prizes the diploma of the Association was awarded, an obvious mistake which was rectified within a few years by attaching the diploma, if given at all, to the first premiums, or awarding it only for special excellence. Special prizes were also awarded for a plowing match to be held on the second day of the fair. The total value of all the prizes offered amounted to about £400, an amount by no means contemptible for a beginning.

Among the exhibits the chief points of superiority which have always been conspicuous at Canadian fairs seem to have already evidenced themselves. In Durham cattle, in fat stock in general, in fruit and vegetables and in dairy produce, the superiority of the Canadian exhibits was much remarked by those who had visited the fairs of the old and thriving State associations across the line. The display of domestic manufactures and farm implements, though not striking, was by no means discreditable as a beginning.

A most encouraging feature was the presence at the fair of numerous buyers, who were prepared to offer good prices for such of the exhibits, particularly in the line of

stock, as were for sale, including representatives from many of the district societies who had been commissioned to make purchases of improved animals and seeds for the use of the members of the local societies.

On the evening of the first day a banquet was held, at which, mingled with the most enterprising farmers of the Province, sat also its most eminent statesmen, judges, merchants and educationists. On all hands the greatest surprise and pleasure was expressed at the unexpected excellence of the display. The banquet was a great success, and became an annual event, looked forward to with interest as both pleasant and instructive, and as the chief yearly social function of agriculture in the Province.

On the following afternoon a public address was delivered from a stand on the grounds by Hon. Adam Fergusson. This was the first of the annual addresses which it became customary for the president in each successive year to deliver publicly during the course of the exhibition, and which at once took their place as among the most interesting features of the year. The subjects treated of the existing state of agriculture, the progress of the year, wherein greater advance might have been made, the results of the latest and most intelligent experiments in cropping and manuring, the value of new inventions, the state of the markets, in general every subject which might at the time be of interest to the agricultural world, could not fail always to excite the earnest attention of the practical and intelligent farmers who attended the fairs.

Of this first address the scope was necessarily somewhat extended. Beginning by telling of the dignity of agricultural pursuits the speaker went on to describe the great natural resources of Canada, and offer suggestions as to how they might be opened up, immigrants brought into the country and the difficulties in the way of settlement overcome. He showed that all this depended much on the farmers themselves; that what would attract a desirable class of settlers would be quite as much their own work, the opening of roads and the adoption of intelligent systems of farming by those already in the country, as any systematic immigration policy on the part of the State, though some such policy, properly looked after, might also be advisable. He showed the evil results which in the older settled districts were already beginning to become manifest through a too exclusive devotion on the part of the farmers to the culture of wheat, and suggested a proper system of crop rotation, and the growing of several products then cultivated but little, if at all, in Canada, such as roots and green crops. He suggested the need of some institution for the teaching of veterinary science in Canada. He ventured a few remarks on the appalling blight which had that season for a second time ruined the potato crop in the country. All these and other points of equal importance he recommended to the earnest study and consideration of the farmers of the Province, and suggested the great advantages which would result from the discussion and experiments along these lines which the Agricultural Association would set on foot, and the dissemination of the results of these by that body throughout the Province. In conclusion he warned the Association to jealously guard against the intrusion into its discussions of politics or subjects of political difference, and suggested that for no other means of equal general advantage could a Legislative grant be made as for the furtherance of the aims and objects of the Agricultural Association.

On the evening of the following day the first annual meeting was held in the Court House. The treasurer's statement showed a balance on hand of £102, chiefly due to the considerable number of life members who had joined. The list of life members affords a proof of the interest taken by the prominent men of the Province in the work of the Association, for in it we find such names as Hon. R. Baldwin, W. P. Howland, William Hume Blake, Hon. Æmilius Irving, and others who at that time or later took a prominent part in the affairs of the country. The officers elected for the ensuing year were: President, E. W. Thomson; Vice-Presidents, Hon. A. Fergusson and Mr. Sheriff Ruttan; Secretary and Treasurer, W. G. Edmundson. It was provided that the executive should consist of the officers and forty directors, two from each district, and these should have power to nominate a committee from among the members who should share and assist in their deliberations. All the officers were to be eligible for re-election

except the president, who should hold office for one year only. It was also resolved to lay the aims and objects of the Association more prominently before the attention of the local societies, with a view to secure their more active co-operation in the work. It was decided to hold the second annual fair in the City of Hamilton, and a strong committee was put in charge of the work, embracing besides the officers of the Association many prominent local men, whose names ensured the success of the local arrangements.

Owing to the success which had attended its efforts in the first year of its existence, and the general approval evoked by its formation, the Association was now firmly established, and the next step was to secure its formal incorporation. Accordingly, when Parliament met in July of the next year, an Act was passed, 10 and 11 Vict., cap. 61, providing that certain named persons who then constituted the membership of this body, with such as should hereafter become members, should be incorporated under the title of "The Agricultural Association of Upper Canada" with all corporate powers and with a constitution which was practically the same as that already adopted at its formation and given above.

The preparations for the second annual exhibition to be held at Hamilton, were carried forward with great energy. The value of the prizes offered was increased to £750, and this, together with the better provisions for the convenience of both exhibitors and spectators which the experience of the previous year had suggested, and the announcement that the Fair was to be opened by Lord Elgin, the new Governor-General, gave promise of success which even the bad weather which prevailed throughout the fair was unable wholly to defeat.

The number of entries was about half as many again as at the previous exhibition. In point of excellence, the exhibits were sufficiently superior to those of the previous year to afford a fair amount of encouragement to the directors. The attendance, however, was kept down by the rain, and as it was on the receipts from this source, outside of the subscriptions and a few voluntary donations from district agricultural societies, that the Association had to depend for its revenue, and as the expenses for fixing the grounds and erecting buildings, to say nothing of the premium list, were very great, we can scarcely be suprised to find that the Association closed its second year about £200 in debt. Of this fair, as of the preceding one, a plowing match was a most successful feature.

On the afternoon of Oct. 7th, the second annual address was delivered by E. W. Thomson Esq., the President of the Association. The topics to which he chiefly devoted himself were the advantages of scientific agricultural education, with the necessity of some provision for it, and the question of the development of suitable markets for Canadian products both foreign and domestic. Besides these he referred to a few of the practical needs of the country such as drainage and a proper system of crop rotation, showing how greatly production might be increased by a proper attention to these. Full of sound, straightforward, practical advice, such an address must have been of wonderful benefit to his hearers at a time when the knowledge and application of such principles were confined to a few only.

The banquet in the evening was a complete success despite the weather. In response to the toast, "Our Noble Patron, His Excellency the Governor-General," Lord Elgin made a few remarks, in which he showed besides a thorough sympathy with the life and work of the agricultural classes, a practical understanding of the chief difficulties that beset them. He looked forward to the growth of industries by which many agricultural products might be manufactured in the country, mentioning in particular the wool industry as one that should be developed. He expressed his great pleasure at what he had seen, especially at the improvement he had noticed in the agricultural implements, and concluded by predicting an era of progress for the farmers of the country.

Mr. Allen, of Black Rock, who represented the New York Association, expressed his pleased surprise at the excellence of the show, and hoped to see Canada better represented at the New York State fairs in future.

At the annual meeting on the following day Hon. Adam Fergusson was elected President for the ensuing year, Henry Ruttan and John Wetenhall, Vice-Presidents, and W. G. Edmundson was re-elected Secretary and Treasurer. Cobourg was chosen as the location of the next fair, which it was decided should last four days.

The wisdom of this last change was apparent in the result, as the storm which prevailed during the early part of the first week in October, 1848 was succeeded by fine weather during the last two days of the fair. The entries this year about equalled in number those of the previous year at Hamilton, but there was a general improvement in quality. Among the cattle as usual the display of Durhams and Grades was excellent, the other varieties as yet being but scantily represented. The sheep and pigs are classed as very fair, and the established superiority in orchard and garden products was maintained. The display of implements on the other hand was still below what it should have been, the superiorty of the American exhibits being noticed. In fact it was found necessary by the management for some years to encourage American manufacturers to compete in this department on account of the deficiency of Canadian productions. Unlike the previous fair this was a financial success, the transactions of the year leaving a small balance to the credit of the Association.

Owing to some misunderstanding the annual address which had come to be looked upon as one of the most interesting and instructive features of the fair, was not delivered on this occasion. The annual dinner, however, was a great success, and was marked by the usual exchange of expressions of good will between the agriculturists and prominent representatives of the other industries and professions in the Province.

The officers chosen for the following year were, President, Henry Ruttan; Vice-Presidents, John Wetenhall and J. B. Marks; Secretary, G. Buckland. The next exhibition was fixed for Kingston, and with a view to securing better weather the date was changed to the first week in September.

For the exhibition of 1849 the most elaborate preparations were made. The city of Kingston and surrounding districts subscribed £600, and a vigorous canvass of the various local societies materially increased the subscriptions from that source. In this year, also, the Government for the first time recognized the movement in a substantial manner by appropriating an annual grant of £250 to its use. In addition a special grant of £350 was made to meet the liabilities of the Association, most of which were standing over from the fair at Hamilton two years before. This enabled the Directors to greatly increase the premiums both in number and amount, to a total value of about £1,500. It was a matter of regret at this as at previous exhibitions that owing to want of competition in many classes a considerable portion of the proffered prizes was not claimed or awarded.

A marked step forward in furtherance of the aim of the Association, to improve the quality of the stock in the country, was the offer of special inducements for imported animals of good quality. In succeeding years still further advances were made in this direction, as we shall see. Another precedent established this year was the offer of prizes for agricultural essays in competition, a special prize of £50 donated by Lord Elgin being set apart for the best treatise on "The Agricultural Advantages of the St. Lawrence and Welland Canals."

The display at the exhibition gave, on the whole, evidence of quite considerable advance. For the first time we find special attention called to the excellence of the horses exhibited. Besides some splendid specimens in the heavier classes, we find noted, one noble blood stallion, owned by John Gibson of the Niagara District. He was from the stud of William IV, and had been first imported by a wealthy American and was valued at £800.

The Durham and Grade cattle were up to the usual mark of excellence, and several other classes had now begun to make a tolerable display, Ayrshires especially being considerably in evidence. The sheep were good, the entries in the finer qualities beginning to grow more numerous, and the display of pigs was extremely creditable. In implements,

also, the display was much improved, and it began to look as if Canadian farmers were no longer to be behind the rest of the world in this respect. Many practical inventions and improvements were noted, and it was through these exhibitions chiefly that they became generally known, and their utility recognized by the farmers throughout the country.

The attendance at the fair was large, and this, with the increased revenue from other sources, left a not inconsiderable balance in the Treasurer's hands, despite the greatly increased outlay for the year.

A feature of this fair, as valuable as it was unexpected, was the presence of Prof. Johnston of Edinburgh, a well known scientist, who was also somewhat of a practical agriculturist. Oh the evening of the second day he delivered in the City Hall a lecture on scientific agriculture, explaning at some length the causes of exhaustion of the soil, and the nature of the different fertilizers required to restore it. He made a few suggestions on such subjects as drainage, root culture, green fodder and improved implements, all of which were then but little understood by farmers. He spoke of the great good an agricultural association might do by spreading information on these and kindred topics. In conclusion he called for better facilities for the education of the farming classes.

The annual address delivered on the following afternoon, by Mr. Ruttan, was one of the most studied and exhaustive that has ever been delivered before the Association. After reviewing the agricultural results of the season, having to notice the crops as generally below the average, he turned his attention to the growing debt of the country, both public and private, showing that the yearly increasing interest had all to be taken out of the ground. The increase of imports over exports he attributed to the rivalry in luxury caused by the settlement after the war of numerous officers with considerable incomes, and to the growth of an official class. By an exhaustive review of the economic conditions of the country at that time, he supported his contention that much of the cultivated land of the Province was already nearly worn out by reckless and unscientific cropping, and advised that money should be kept on the land, not taken out of it. He laid down four rules as necessary and each of these he carefully elaborated. They were. First. Reduced expenses. Second. Cultivate less land. Third. Vary and increase the number of farm products. Fourth. Manufacture for ourselves. He especially invited attention to dairy husbandry and to the study of agricultural science, insisting in his concluding remarks on the necessity of a fair general education and keeping abreast of the times by reading some good agricultural journal, and careful study of one's life work in this as in other vocations.

At the annual meeting the officers chosen for 1850 were: President, John Wetenhall M. P. P.; Vice-Presidents, J. B Marks and Thos. C. Street; Treasurer, T. G. Ridout; Secretary, Geo. Buckland. Some slight changes were made in the constitution of the Association by by-law according to powers conferred by the Act of incorporation. It was resolved that an executive committee should be chosen every year to assist the officers, and this enlarged committee should take charge of the fairs, erect buildings, collect and pay out monies, and in general, transact the business between the annual meetings.

At the first meeting in the following year, held in February 1850, further by-laws were adopted to regulate the transactions of the fair committee, that it might be able more efficiently to perform its work The finances of the previous year were straightened out, and after everything had been settled a balance of over £100 was left. It was decided that the next fair should be held at Niagara. A careful consideration of the results and experience of the preceding years suggested several improvements, chiefly in the mode of taking entries and their classification. The Government grant was this year raised to £600, and this brought the total receipts for the year to above £2,000, a considerable increase over those of any previous year. The amount of prizes actually paid out this year was nearly £1,000, an increase of about £300. The number of entries was 200 greater than the year before, nearly ever department contributing to the increase. The stock shown exhibited much the same points of superiority and defect as usual, and the agricultural product kept up their marked excellence, showing some improvement even, the samples of wheat competing for the Canada Company's liberal prize, being especially fine. A plowing match was again a successful feature.

On the evening of the first day of the fair a practical address was delivered by Prof Croft, of Toronto University, on the chemistry of agriculture, which was much appreciated by his numerous auditors. The annual address was delivered by the senior Vice President, J. B. Marks, the Association during the summer been deprived by death of its esteemed President, John Wetenhall. Mr. Marks devoted his address chiefly to a consideration of the questions of immigration, and of the production and proper use of artificial fertilizers. He also expressed the belief that freer trade with the United States would be of great benefit to Canadian farmers.

For the next year, J. B Marks was elected President and T. C. Street and Wm. Matthie, Vice-Presidents, R. L. Denison, Treasurer, and Geo. Buckland, Secretary. The fair for the following year was fixed for Brockville.

Part II. The Board of Agriculture 1851—1868.

The year 1850 had been marked by a step of the greatest importance—the establishment by the government of an official Provincial Board of Agriculture. This institution was not intended to to conflict in any way with the Association, but merely to act as the executive of that body in so far as their spheres coincided, besides performing certain more extended functions of its own, assigned it by the Legislature. Its primary objects we gather from the preamble of the Act 13 and 14 Vic., cap 73, by which it was constituted: "Whereas," it begins, "the improvement of agriculture is an object of the first importance to the people of this Province, and whereas the establishment by law of a Board of Agriculture in Upper Canada to collect and disseminate statistical and other useful information concerning the agricultural and other resources of the country, would generally promote such improvement,—be it therefore enacted that a Board of Agriculture shall be established in Upper Canada and may consist of ten members, of whom five shall be a quorum."

The constitution assigned to the Board was about the same as that of the Agricultural Asscciation. The Inspector-General of the Province, the Professor of Agriculture in the University and the President of the Association for the time being were to be *ex-officio* members. A chairman was to be appointed yearly, and the rest of the members were to be appointed at their annual meetings by the district societies, each of which should have one vote, the seven receiving the greatest number of votes to be members. Two members were to retire each year, and their successors were to be chosen in the same way. The members of this Board and the presidents of the several district societies, were to be the directors of the Provincial Association.

The eleventh and twelfth clauses, which treat of the further duties of the Board, may be given in full, they are as follows:

11. The Board to collect information upon all questions concerning the agricultural interests of the Province, and to take such means as they may think best to promote those interests, to prepare yearly a report of their transactions together with extracts from the reports of the county and township societies, and proceedings of the Provincial Agricultural Association, the said report to be laid before Parliament and published in such manner as the Legislature may direct.

12. Duty of the Board to prepare a plan for establishing an experimental or illustrative farm in connection with the Chair of Agriculture in the University of Toronto, or in connection with the Normal School or otherwise, and to make any recommendations they may think expedient for extending agricultural education throughout the Province.

With its executive machinery thus improved, agriculture entered on its sixth year of organized progress. A practical result early in the season was the establishment by the Senate of the University of Toronto of a professorship in agriculture, and the provision for the setting apart of a portion of the University lands for an experimental farm, in connection with the chair. The nucleus of an agricultural library was formed by the gift to the Association from Prof. Nichol of a complete set of the transactions of the British Board of Agriculture.

Early in this year a special medal valued at £10 was set apart for the best essay on "Agriculture and its Advantage as a Pursuit," to be competed for by Canadian

farmers. This was the first of many papers and essays on subjects of agricultural interest which were gathered by the Board from year to year, and published in the report of its transactions for the benefit of farmers who should care to read and profit by them.

Brockville having been decided on as the site of the fair, the local preparations were pushed forward with great energy by an able local committee and the newly constituted Board, the members of which were announced in the Canada Gazette of June to have been elected as follows : E. W. Thomson, of York ; Hon. Adam Fergusson, of Woodhill ; Henry Ruttan, of Cobourg ; R. L. Denison, of Toronto ; David Christie, of Brantford ; J. B. Marks, of Kingston, and John Harland, of Guelph. The prize list was carefully revised, and a new feature introduced in the setting apart of £50 to be awarded for the best county agricultural reports. These reports were to describe accurately and exhaustively the agricultural conditions and history of the counties for which they were written, and were to be handed in early the following year. The aggregate amount offered this year in prizes was about £1,250, the amount actually awarded reaching about two-thirds of that amount, the lack of competition in many classes still continuing. The entries were somewhat less than 1,500, about the same as in the two previous years. The general quality of the articles exhibited seems also to have been about the average, the same points of excellence and inferiority being noticed. From a financial standpoint the year was successful, owing to the increase of the Government grant to £1,000. In competition for the medal offered for essay on " Agriculture and its Advantages as a Pursuit," two excellent productions were handed in, the prize going to Mr. William Hutton, of Belleville, who carefully elaborated the subject on the lines of the quotation with which he began his essay, " He that causes two blades of grass to grow where only one grew before is a benefactor to his country." A second prize was awarded to another essay by Mr. John Lynch, of Brampton, a careful and accurate writer on agricultural subjects, who afterwards presented several successful papers in the competitions for county reports.

The annual address delivered by the president, J. B. Marks, Esq., was much along the usual lines, but contained several new and valuable ideas concerning scientific drainage and manuring. At the Directors' meeting T. C. Street was elected president, and William Matthie and Sheriff Treadwell, of L'Orignal, vice-presidents for the following year. A resolution was passed recommending George Buckland, the secretary of the Association, for the recently established chair of agriculture in the University.

At the first annual meeting of the Board of Agriculture a considerable amount of important business was transacted. After appointing E. W. Thomson chairman for the ensuing year, the Board proceeded to take measures to direct the attention of the county societies to the new Agricultural Act, 14 and 15 Vic., cap. 127, providing that the local societies should annually send their reports to the Board, and receive their Government grants through and upon the certificate of the Board. The county societies were also requested by the Board to transmit to it, each the names of three persons qualified to act as judges at the exhibition.

The Board this year succeeded in making arrangements with the publishers of the " Canadian Agriculturist," which had succeeded the " British America Cultivator," by which this valuable journal was to be supplied to members of agricultural societies for fifty cents per annum. Of the November number, which contained a valuable report by Mr. Sheriff Treadwell on the " Agricultural, Social and Industrial Conditions of Canada," a large number of extra copies were ordered by the Board and distributed gratuitously. Provision was also made for the annual expenditure of a sum not to exceed £50 on the agricultural library, and the first volumes purchased were the British and American Stud Books and Herd Books. Feeling that as yet it was unable to publish Herd Books in Canada, the Board ordered blank books for recording the pedigrees of horses and cattle, an important step in furthering the permanent improvement of the stock in the Province. The exhibition of 1852 was fixed for Toronto.

Early in January of this year, 1851, an Order-in-Council was made appointing George Buckland, Esq , Professor of Agriculture in the University of Toronto, in accordance with the recommendation of the Association. The first Board meeting for the year

was held in April. The prize list was carefully revised and extended, and the amount offered raised to very nearly £1,500, a special feature being a prize of £30 donated by Mr. Street for the best general purpose stallion. It was decided to discontinue the plowing match with a view to establishing in its stead county and district plowing matches, the former system having the disadvantage of securing local competition only. Besides this it was felt that to be successfully and properly conducted a plowing match needed a whole day, and so much time could not be given it during the rush of the provincial fair. It was recommended that a winter course of agricultural lectures be delivered by the professor of agriculture, as students could not for the most part attend during the summer. Prof Croft was appointed consulting chemist to the Board. Several donations to the library were noted and the donors publicly thanked.

The next meeting of the Board was held in August. Several valuable communications were laid before it, describing the results of experiments in seeds and stock-breeding by competent and practical men. A letter was read from John Arnold, of London, England, in reference to the introduction into Canada of the sugar beet manufacture, and also to some agricultural implements which he proposed bringing into the country. A communication was also laid before the Board from Hon. Malcolm Cameron, the minister of the newly created Government Department of Agriculture, in regard to the working of the new Agricultural Act, in reply to which the Board made some practical suggestions for the improved organization of county and township societies, and advised the giving of prizes by municipalities to the best managed farms within their limits.

In the course of this year several prizes previously offered were awarded by the Association. The Governor-General's prize, offered some years before, for the best essay on "The Bearing of the St. Lawrence and Welland Canals Upon the Interests of Canada as an Agricultural Country," was awarded to Thomas Keefer, Esq., of Thorold. In competition for the prizes for county reports offered in the previous year only two essays appeared ; one on "The State of Agriculture in the County of Wellington," by John Harland, Esq , of Guelph, received the first prize of £20, and the other by William Hutton, Esq., of Belleville, the second prize of £15. These reports and those received in succeeding years on the various other counties in competition for the prizes offered from year to year by the Board, form collectively a most valuable source of information as to the economic history of the Province from its earliest settlement down to the year 1850 or a little later. A specially noteworthy fact is the progress that appears in the more recent of these years in agricultural methods, and the way in which this is shown to have been due to the educative influences of the various agricultural societies.

In the summer of this year the first annual report of the Board of Agriculture was laid before the Legislature. In this document the objects of the Board are set forth, showing it to have been constituted by Statute, the Council of the Agricultural Association to conduct the affairs of that body during the intervals of it annual meetings. The progress made by that organization was referred to and the importance of it work described. The agricultural legislation of the previous year was reviewed, and some further improvements suggested for the better working of the local societies. The plans for an experimental farm on the University grounds in connection with the chair of Agriculture were specified, for the approval of Parliament. The finances of the Board were shown to be satisfactory, the balance on hand being nearly £200.

The seventh exhibition of the Association was held in Toronto as appointed, from the 21st to 24th of September 1852. Toronto was now a city of 32,000 inhabitants and already the commercial centre of the Province. The fair grounds were located in a large common, west of what is now called University street, and somewhat to the north of Queen street. The Toronto Cricket grounds and the Caer Howell pleasure grounds formed the northern boundary. On the bowling green which still exists there, the large refreshment tent was erected. The unfavorable weather which prevailed for part of the time did not prevent this fair from being the most successful yet held. The number of entries was over 3,000, twice as large as on any previous occasion. On one day the number of visitors was estimated at nearly 25,000. The buildings were of a much more sub-

stantial character than had before been erected, and were five in number, viz.—The Fine Arts Hall; the Floral Hall; the Agricultural Hall; the Mechanics' Hall and a building for the display of school apparatus, in addition to the sheds and pens. The exhibits were on the whole much superior to those of previous years. One article which attracted particular attention was a monster cheese, weighing nearly 700 lbs. exhibited by Mr. Ranney of Oxford County, an earnest of the enterprising spirit in this line which was to put this Province at the head of the world in the department of dairy husbandry. The display of cattle was of particular excellence, the most extensive exhibitor being Mr. Ralph Wade of Cobourg. The poultry display also first made itself prominent at this fair.

The annual address was delivered by the President, T. C. Street. He began with a review of the natural resources of Canada and of the progress already made. He showed that while the price of wheat was falling that of meat was rising, and dairy productions were becoming more profitable. This, with the growing exhaustion of the soil in the older districts, made necessary a complete change in the prevailing mode of farming. Attention was called to improvement in stock already effected by care in breeding, and greater attention to this advised in the future. Experiments in green fodder were beginning to show some of its advantages, as well for the land as for stock. The officers elected for the next year were President, Wm. Matthie; Vice-Presidents, Sheriff Treadwell and David Christie, M.P.P.

The most important step of this year from an agricultural stand-point was the creation of a Government Department of Agriculture, with a Minister at it head to supervise the agricultural Board and associations and disseminate the statistics collected by those bodies. The first Minister of the new Department was, as above noted, Hon. Malcolm Cameron. The same Act which constitued the Department 16 Vic. cap 11 contained provisions for the more effectual performance of its duties by the Board, and provided for Government assistance in the establishment of an experimental farm, the importation of stock and seeds, the foundation of an agricultural library, and the publication and circulation of the record of the transactions of the Board with the prize reports and essays laid before it. A business office for the Board was secured in the Government buildings at the corner of King and Simcoe streets in Toronto. During the winter Prof. Buckland delivered his first series of agricultural lectures in the University.

The first meeting of the Board for 1853 was held at the new offices in April. A special donation of £50, given by the Governor-General was set apart as a prize for the best pipe and drain tile machine introduced and put into operation by a Canadian. The Secretary was instructed to collect and publish information from England and the United States as to the manufacture and efficiency of such machines there. A donation of £50 by Mr. Matthie, President of the Association, was appropriated for sweepstake prizes at the fair. Hamilton was chosen as the site of the fair, and a local committee appointed to assist the Board. The expertmental farm being now established, a sum of £250 was set apart for immediate improvements, and a report ordered on what may be further necessary. The prize list as revised showed the premiums to be over £1,600 in amount, including the special prizes, most of which as offered in any previous year were continued, and several new ones added.

At the midsummer meeting preparations for the fair occupied most of the time. Considerable progress was reported from the experimental farm, and further improvements, including a dwelling house, ordered. A letter was read from Frederick Widder Esq. commissioner of the Canada Company, presenting to the Board a flax machine which the Company had imported, to be used by the Board to the best advantage in the interest of flax culture. A recommendation was sent to the Minister of Agriculture asking that better provision be made for the publication of the reports, essays, papers an other literature secured and approved by the Board.

The eighth exhibition was in every way successful. Owing to local causes the number of entries was slightly less than at Toronto the year before, but no appreciable falling off in the quality of the exhibits was observed in any direction, and in some classes

the display was improved, particularly in machinery and implements. On Thursday evening the third day of the fair, a lecture was delivered by Prof. Wilson, the English Commissioner to the New York Exhibition, in which he made some valuable comments on what he had seen. He noted some defects in the dairy implements on exhibition and suggested improvements, but highly praised some of the plows and cultivators, observing some points of superiority to anything he had seen in the United States. Some remarks which he made upon reaping machinery gave rise to a good deal of interesting discussion among those present.

Owing to the illness of the President, the annual address was delivered by the senior Vice-President, Mr. Treadwell. Dealing chiefly with economic subjects, he advised the encouragement of home manufactures, pointing out how rapidly the country had begun to advance, since its railway system was begun. The officers chosen for 1854 were President, Mr. Treadwell; and Vice-Presidents David Christie and Wm. Niles. It was decided that the exhibition should be held in London.

At the autumn meeting of the Board it was resolved to endeavor to secure the co-operation of the Association in Lower Canada to provide that Canada should be suitably represented at the great Fair in England for which the Crystal palace was then in course of erection at Sydenham. It was also decided to communicate with the Canadian Ocean Steamship Navigation Co. with the object of securing a fair rate of transport on stock imported into Canada. Prof. Buckland was instructed that at such seasons as he was disengaged from his duties in the College, the Board expected him to make a tour of the Province and deliver lectures and addresses on subjects of practical interest to farmers. An offer was read from the patent office at Washington to exchange agricultural reports and seed specimens with the Board, which was accepted with thanks. Prizes of £15 each were set apart for reports on the Counties of Carlton, Welland and Prince Edward. Prizes were awarded to a report on the state of agriculture in the United Counties of York, Ontario and Peel, by H. Y. Hind, of Trinity College, Toronto; to reports on theCounties of Peel and Grey, by John Lynch and A. F. Scott, of Brampton; to an essay on the "Dignity of Agricultural Labor," by Thos. McMicking of Stamford; and to an essay on the nse of bone dust as a manure by E. W. Thomson.

The annual report of the Board to Hon. John Rolph, the new Minister of Agriculture, showed the progress of the year to have been satisfactory, and the Board in a good financial condition. The Government grant to the county societies for the year totalled about £7,200.

Early in the following year, circulars were addressed to the county societies requesting their co-operation in securing an efficient representation of Canadian products at the approaching exposition at Sydenham.

The first meeting of the Board was held in May. The four retiring members having been re-elected, the membership remained the same as it had been the preceding year, viz., E. W. Thomson, President; John Harland, J. B. Marks, Henry Ruttan, David Christie, Hon. Adam Fergusson, and *ex-officio* members C. P. Treadwell, President of the Association; Hon. John Rolph, Minister of Agriculture, and Prof. Buckland. The last named continued to act as secretary. Besides the preliminary provisions for the fair at London, several other matters of importance came up for consideration. In view of the liability of seed to deteriorate in successive years in this climate, it was resolved to purchase in England a considerable quantity of oats, barley and peas and distribute it at cost price. The Board felt that as yet it could do nothing in the way of importing stock itself, but to further pursue its policy of encouraging private importation, it resolved to double the amount of any first prize granted at the exhibition to any animal which might have been imported during the year. This offer, continued as it was from year to year, proved a valuable inducement to importers. The total amount of prizes offered this year was nearly £1,800, an increase of nearly £200 over the list of the previous year. Provision was also made at this meeting for further improvements and buildings on the experimental farm.

The local arrangements for the fair at London were carried out very effectively. The grounds and buildings were laid out artistically and an artificial lake excavated several acres in extent. The Great Western Railway Company very liberally offered to carry exhibits to and from the fair free of cost. The entries showed a slight increase, and the amount of premiums awarded more nearly equalled the amount offered than on any previous occasion. A slight falling off in a few departments was due to the then comparatively isolated situation of the city of London.

The occasion was graced by the presence of Lord Elgin, who, in response to an address of welcome, made a few happy remarks, congratulating the people of Canada on effecting the treaty of reciprocity with the United States, which had just been unanimously ratified by the Legislature.

During the course of the fair, public meetings were held as usual for discussion. They were also addressed by several prominent foreign agriculturists who were visiting the fair. At the annual meeting David Christie was elected president and William Niles, M.PP., and Baron de Longueuil, vice-presidents. Cobourg was chosen as the site for the next fair, and a by-law was adopted consolidating the constitution. The address of the president, Mr. Treadwell, was chiefly taken up with a statistical account of the progress of agriculture in Canada, and the provisions for the education of the rural classes.

The fall meeting of the Board was held at Toronto in December. The report showed the balance on hand to be over £1,300. Prof. Buckland presented a report of visits made by him to several county fairs, showing what appeared to be an encouraging amount of progress and increasing usefulness on the part of these institutions. The government grant to the local societies for the year came to about £8,100. A matter of great importance considered at this meeting of the Board was the question of the proper registration of stock. It was still felt that the expense of getting up herd books would be too great for the Board as yet to sustain, so on the advice of Hon. Adam Fergusson it was decided to open and maintain at the offices of the Board in Toronto, a stock register for thoroughbred animals, in which owners might record their stock on sufficient evidence being given as to pedigree. A further move of importance was the resolve to appoint a special committee to impress upon the Government the advisability from an agricultural standpoint of the foundation of a school of veterinary science with adequate instructors and appliances, in connection with the Chair of Agriculture in the University of Toronto. Prizes were offered for reports on the Counties of Bruce, Simcoe and Prescott, and awarded for reports on Prince Edward, Welland and Carleton, to D. B. Stevenson, M PP., William McMicking and E. Billings respectively.

The first meeting of the Board for 1855 was held in May. The prize list was the chief matter under discussion. It was carefully revised, and the amount offered increased to over £2,300. For prize stock that had been imported during the year, it was decided that any prize money won should be tripled instead of doubled as before. This offer, together with the sweepstake prizes in the different classes made the amount which could be won by imported animals of good quality very considerable indeed, and formed a substantial inducement to enterprising breeders to take this way of improving their stock, which a yearly increasing number took advantage of. The effect of these inducements and of keeping a stock register by the Board was not long in making itself manifest in the greatly increased number of thoroughbreds exhibited, not only at the Provincial fairs but at the smaller county shows as well, as also in the quality of the exhibits. Such a change, of course, carried along with it a corresponding improvement in grade stock, and the effect was not confined to securing a better class of animals but the change in the quality of dairy products was also noticed. The fact that the Province of Ontario to-day leads the world as she does in the production of butter and cheese, that the general quality of her stock as a whole is perhaps unsurpassed, that her grade cattle command the highest prices as beef, and that her hackney and heavy horses attract buyers from every quarter of the globe, must be due to an excellent foundation laid early in its history, before it was allowed to be overrun with stock of an inferior description ; and in directing its efforts towards this end at such an early date, as well as consistently throughout the whole course of its existence, the Board of Agriculture has accomplished a work the importance and lasting effect of which can scarcely be over estimated.

The reports received this year by the Board from the county and township societies showed that the interest in these institutions was growing, their membership increasing and the quality and number of the exhibits at the local fairs yearly improving. Numbers of the societies continued to lay out part of their revenues in the purchase of quantities of seed for distribution among their members, or in obtaining valuable breeding animals or articles of general utility, such as stumping machines and the like for the common use of the subscribers. For most of these societies the Board acted as a purchasing medium, buying in large quantities and to much more advantage than the societies could have done individually.

At the midsummer meeting Mr. E. W. Thomson was re-elected chairman of the Board for the ensuing year. Provision was made for the distribution of the seed grown on the experimental farm and also of a considerable quantity that the Board had imported. The remainder of the time was chiefly taken up in perfecting the arrangements for the fair.

At the exhibition of this year, which was held at Cobourg during the second week in October, the prominent feature was the display of cattle which was pronounced by numerous visitors from the United States to be the best ever yet seen on the continent. The display of agricultural horses as well was of unusual excellence. The other classes of stock were also very well represented, but in the mechanical and horticultural departments the fair was rather weak. The total number of entries was above 3,000 and the prize money actually awarded was over £1,700, some £400 greater than in any previous year. This is the first year for which we have been able to discover a detailed copy of the prize list. The premiums seem to have been very fairly divided among the various classes and sections, and in addition some specially generous prizes were offered in particular departments and for general excellence, both by the Association and by private subscribers. There were also a considerable number of awards tripled in value because won by imported animals, chiefly among the cattle. We notice especially a two-year old bull exhibited and imported by F. W. Stone, of Guelph, and a cow and heifer of the same class imported by the same breeder. Wm. McMicking, of Stamford, had some fine imported Herefords, and P. W. Gordon, of Paris, and John Snell, of Edmonton, some imported Southdown sheep. Several other prominent breeders had fine animals on exhibition which had been imported in previous years. There are many other interesting points about the list and the awards, and it is a matter of regret that space forbids us to consider it more fully.

The annual address delivered by the President, David Christie, M.P.P., was of more than ordinary interest. He spoke of the success achieved by Canada at foreign exhibitions, at London, at Paris and at New York. He noted the beneficient effects of the closer trade relations with the United States brought about by the reciprocity treaty of 1854. Then referring to the natural dignity of agricultural occupations he deplored the way in which they were neglected, the land drained of its more promising and ambitious sons to feed the professions, and the farm thought good enough only for the slower witted, and then abused and exhausted by its near-sighted tillers in their mad haste to turn over as much profit as possible in a short time, in their eagerness to be rich. He again emphasized the necessity of a proper study of agriculture and the evil effects of the popular aversion to learning among the farming classes. He concluded with some practical remarks on the culture of wheat.

On the last day the exhibition was visited by Sir Edmund Head, the new Governor-General. His Excellency was in the course of a tour through the Province, and expressed himself as much pleased at the progress which he saw everywhere being made by agriculture.

At the annual meeting of the Association it was resolved to hold the next fair at Kingston. Baron de Longueuil was chosen President and Geo. Alexander and D. B. Stevenson, M.P.P., Vice-Presidents of the Association for the ensuing year. From a financial standpoint the year was fairly successful, the balance to the credit of the Association, in spite of bad weather during the fair, continuing in the neighborhood of £1,000.

During the year prizes were awarded for essays on the agricultural conditions and prospects of the counties of Bruce and Simcoe as announced, none apparently having been received from Prescott. The first prizes for each county went to John Lynch, of Brampton, and a second prize for an essay on the county of Simcoe was awarded to Wm. E. O'Brien, of Shanty Bay.

For the year 1856 the elected members of the Board were the same as in the previous year. Baron de Longueuil now sat on the Board as President of the Association, and Hon. P. M. Vankoughnet had replaced Hon. J. Rolph as Minister of Agriculture. At the spring meeting besides the preliminary arrangements for the fair several matters of importance came up for discussion. Some time was given to considering the best way of advertising the country so as to attract a suitable class of immigrants, and several proposals were made, to which it was determined to call the attention of the Government. The subject of a general drainage Act, concerning which communications were constantly being laid before the Board, was also thoroughly discussed, but the Board was unanimously of the opinion that in view of the vast extent and small population of the Province, private enterprise would for some considerable time have to accomplish all that could be done in this line. Regulations were made for the more effective distribution of the seed obtained by the Board and that grown upon the experimental farm, and it was recommended that the Professor of Agriculture should devote a considerable portion of his time to the delivery of popular lectures on agricultural topics throughout the Province.

The prize list was changed but little from that of the previous year, a slight increase only being deemed advisable. The special premiums for imported stock were continued on the same basis as before. One new feature of interest was a special prize of £15 offered for the best machine for breaking stone for macadamizing roads. It was determined that in future the local committees in charge of the Fair arrangements might draw upon the Board to a considerable amount, in order that the buildings erected might be of a more permanent character, and suitable for exhibitions in after years instead of the temporary edifices which had previously been constructed from year to year.

The tone of the reports received from the county and township societies of their work in the preceding season was more than usually encouraging. The high prices of agricultural produce which had prevailed since the treaty of 1854 had greatly increased the wealth and independence of the farming classes, and in consequence an unusually general amount of interest was taken in agricultural improvement and in the organizations formed for this purpose. Some of the counties seem still to have been hampered by the lack of suitable grounds for their exhibitions, but in most of them this difficulty had been by this time overcome, and many of them had already permanent and commodious buildings in their hands. The improvement in the quality of the stock exhibited was very general, in some cases it was extremely marked and directly traceable to the valuable breeding animals which the several societies had obtained for the use of their members. One further important result of this period of agricultural prosperity was the rapid increase in population, especially in the outlying communities, which was reported from every quarter.

At the exhibition of this year held at Kingston the Association kept up its record for making some progress every year. The number of entries showed a substantial increase, totalling nearly 3,800, and if in some of the classes which had shown particular excellence in preceding years there seemed to some to be a slight falling off, this was more than compensated for by the great improvement in the display of smaller stock which had hitherto been somewhat backward, and in the horticultural and mechanical departments. A new and striking feature of this exhibition was the magnificent Crystal Palace which the enterprise of the local committee had led it to construct on the model of the great edifice at Sydenham. The fair was honored by visits from the Governor-General and from Hon. Myron H. Clarke, the Governor of New York State, to both of whom addresses were presented, to which they responded suitably.

Considerable interest was taken in the public meetings for the discussion of agricultural questions, which were held every evening during the fair. Baron de Longueuil's address on the afternoon of the last day was devoted chiefly to a description of the nature

and effects of the most noxious of the diseases that affected the crops and stock in Canada, and a few of the simplest remedies which science and practice had proved most efficient in meeting these.

Geo. Alexander, of Woodstock, succeeded to the Presidency of the Association in 1857, and D. C. Stevenson, M.P.P., and W. Ferguson were chosen Vice-Presidents. Brantford was selected as the site for the next fair. Prizes for reports on the counties of Huron and Addington were awarded by the Board to Thos. McQueen, of Goderich, and E. J. Barker, of Kingston, respectively.

The first meeting of the Board in 1857 was held in Toronto on the 20th of January. A considerable amount of time was spent in discussing the position of the local committee for the late fair in Kingston, who on account of their great outlay on buildings and grounds aggregating about £4,000, found themselves about £1,000 in debt. To meet this it was resolved to raise a loan on the buildings left, which were of permanent nature and worth at least £3,000. An exhaustive account of the observations which he had made upon his tour through Western Ontario, visiting several of the county societies at their meetings and fairs, was laid before the Board by Prof. Buckland. Some suggestions were made for improvement in the organization of these societies in this report and especially some changes advised for the better conduct of the local fairs. These were considered by the Board, and some of them adopted in the recommendations made to the Government for the new Agricultural Act then contemplated. This report was published with the transactions of the Board. It was decided to ask the Government to assist the Board in bearing the expense of a more extensive circulation of its reports, it being felt that the valuable agricultural literature they contained was not sufficiently accessible to the farmers of the Province at large. A report was also read from R. L. Denison and H. C. Thomson, the treasurer and recording secretary of the Board, respectively, who had attended as delegates the New York State Fair at Watertown. Among several practical suggestions advanced, one of particular value was the furnishing at the fairs of steam power to drive the machinery exhibited, a device which had not yet been adopted in this Province. This excited a good deal of favorable comment among the members, but it was a good many years before the idea was adopted and carried out at the Canadian fairs. Attention was also called by the delegates to the success of several Canadian competitors. On the whole the exhibition was pronounced considerably inferior to those held in Upper Canada, and the premiums offered were less by about $2,000.

On a careful revision of the prize list the amount offered was raised to over £2,500. In addition to the usual increased premiums for imported stock a special prize of £50 was offered for the best agricultural stallion imported since the last exhibition.

The reports received from the county societies this year showed that the total amount subscribed by these societies during the year had increased by about £200, representing an increase in membership of seven or eight hundred, or possibly more, as the membership fee in some of them was very small, a very encouraging showing, indeed. To illustrate the work being done by the Board and different societies under it in bringing improved stock and seeds into the country, a few figures taken from the trade and navigation returns for this year may be given. The value of the seeds imported during the year was $89,118, all of which, of course, was imported for the purpose of improvement. Horses were imported to the value of $168,729; cattle to $51,627; sheep to $7,919; pigs to $18,900, and poultry to $1,593. Of course we are unable to determine to what precise extent these importations were made for breeding purposes, but, considering the condition of Canada at that time, it is fair to presume that but a small proportion can have been designed for other uses, or for immediate consumption. If this is true, the outlay made from year to year in bringing stock and seeds into the country cannot but be looked upon as a most judicious and profitable investment, which is even now bearing interest a thousand fold.

For the fair at Brantford the number of entries was over 4,300, 400 more than on any former occasion. The increase was chiefly in the departments of cattle, sheep, garden products and machinery. Especially encouraging was the display of agricultural

implements, there being about twice as many on the grounds as on any previous exhibition. Among the successful exhibitors in this class appear the names of Rice Lewis, of Toronto, for plows, Massey, of Newcastle, and R. & R S. Patterson, of Belleville, for mowing and reaping machinery, and Ganson, Waterous & Company, of Brantford, for agricultural steam engines.

During the week, the fair was visited by Sir William Eyre, Commander-in-chief of the forces, who was then administering the Government in Canada, and the banquet in his honour in the evening was one of the most successful functions of the kind ever held by the Association. Besides His Excellency there were present several ministers and members of the Upper House, and some prominent Americans, guests of the Association.

On the following afternoon the President, George Alexander, delivered the annual address, dealing chiefly with the history and resources of Canada as an agricultural country, and the economic questions then most affecting Canadian farmers. The public meetings held during this fair were of unusual interest, and productive of much valuable discussion. The question of establishing a fair permanently in one or more places, instead of changing its location from year to year, was much discussed, but the great majority of the delegates favored the retention of the system then in vogue. For 1858 D. B. Stevenson was chosen President, William Fergusson and John Wade, Vice-Presidents. After some discussion Toronto was chosen as the site of the next fair.

By an Act passed in 1857, 20 Vic. cap. 32, the various former Agricultural Acts were consolidated, and, besides some minor changes, it was enacted that to the Board of Agriculture as it was then constituted, the president and vice-president of the Board of Arts and Manufactures should be added as members *ex-officio*, as also the Superintendent of Education for Canada West. The new members thus given seats for 1858 were W. B. Jarvis, of Toronto, Dr. Beatty, of Cobourg and Rev. Dr. Ryerson.

With its membership thus increased, and a larger sphere of usefulness opened up to it through its connection with the industrial pursuits, the Board entered on its work for the year 1858. The elected members were the same as before, except that Mr. George Alexander had replaced Mr. John Harland, deceased. At the first meeting, held in March, Mr. Thomson was re-elected chairman. Some time was spent in determining where the fair grounds in Toronto should be located. The site finally chosen was a part of the Garrison common to the south of the Asylum grounds. Here a plot of twenty acres was permanently set apart by the citizens of Toronto for the purpose of agricultural exhibitions. The local arrangements were put in charge of a committee consisting of the mayor of Toronto, the warden and sheriff of the Counties of York and Peel, and several prominent business men of Toronto. It was determined that no effort should be spared that this fair should surpass any of its predecessors.

It was determined by the Board that a practical trial of the different agricultural implements intended for exhibition should be held at some convenient point previous to the fair, and a report from the judges at this trial should be submitted to the judges at the fair to assist them in coming to a decision, and that they should award no prize to any implement which had not so competed.

An opportunity having been presented, the Board resolved to obtain control of the "Agriculturist" journal, published by Mr. William McDougall, that it might have a more accessible medium for communicating with the farmers of the Province. It was also decided to establish an agricultural museum, and a committee was appointed to arrange with the Canadian Institute for the requisite accommodation.

With the object of securing further information on subjects of practical interest to farmers in a form suitable for publication in the "Agriculturist" and in the reports of the Board, it was resolved to set apart $300 for essays on three new subjects, viz., "The Practical Adaptation and Money Value of Science to the Canadian Farmer," "The Extent to which Improved Systems of Husbandry may be Introduced into this Province," and "Fruit Culture."

In pursuance of an advantageous offer from a Canadian manufacturer, the Board resolved to purchase, at a considerable reduction, $500 worth of bone dust fertilizer, and

retail the same at cost price to farmers. Some investigations were also set on foot by the Board with reference to the potato rot and wheat fly which were at that time disturbing farmers a good deal, and as to how these pests could best be destroyed.

A permanent site for agricultural purposes having been obtained in Toronto, it was determined to erect a permanent and substantial building to cost about $25,000. On the 15th of July the corner stone of this edifice was laid with due ceremony by Hon. P. M. Vankoughnet, Minister of Agriculture. The building, a veritable crystal palace, was closely modelled after the original structure at Sydenham. Its dimensions were 256 x 144 feet.

The Board met again in August. In compliance with numerous petitions it was decided to keep the indoor part of the exhibition open for one week after the rest of the fair was over. The amount of the prize list was increased to nearly £2,700.

The reports from the county societies showed the progress made to have been less than usual. This was chiefly owing to the comparatively poor crops of this and the preceding season. An unusual lack of interest in all attempts at improvement was complained of.

The exhibition of 1858 was in every way a success. The number of entries was over 5,500, 1,200 more than in 1857. In almost every class some improvement was noted, though most of the prize animals had been exhibited on previous occasions. Some fine imported stock and some excellent young animals were also exhibited. In implements and machinery the improvement was most marked, the display in these departments far surpassing any ever seen before in Canada. Over £2,300 were actually awarded in prizes.

Owing to the illness of the President, Mr. William Ferguson delivered the address on the fair grounds this year. His address dealt chiefly with economic subjects, and he strenuously advised attention to the development of home industries.

As senior Vice-President Mr. Fergusson succeeded to the presidency for the next year, and John Wade and John Barwick were chosed Vice-Presidents. Kingston was decided upon as the location for the next exhibition.

The question of establishing in Upper Canada a veterinary college had, as already noticed, been several times discussed by the Board, and some information on the subject had been collected by committees appointed for that purpose. The necessity for some immediate provision was becoming imperative in the interests of the agricultural community, so at the first meeting of the Board in 1859 on the advice of Hon. Adam Fergusson, it was decided that the Board should enter into communication with Prof. Dick, principal of the veterinary school in Edinburgh, Scotland, with regard to the necessary steps to establish such a school in Canada, and the probable annual cost for its maintenance. The subject of flax culture was also carefully discussed, as there was a large number of communications upon the subject laid before the Board. It was resolved to set apart a sum of $2,000 to encourage the cultivation of this article which it was then believed might become a staple product in Canada.

The continued general depression was shown by the discouraging reports received from the county societies again this year as last. The Board also received a communication from Hon. Mr. Ross, the Minister of Agriculture, stating that owing to the same general financial distress, the grant for agricultural purposes would this year have to be materially reduced.

Considerable discussion was this year provoked by a bill about to be laid before Parliament by John Carling, M.PP., for London, which proposed to limit the location of the fairs to the cities of London, Toronto and Kingston. To this proposal the Board finally gave a hesitating approval, but at the annual meeting of the Association in the fall this consent was negatived, the feeling of the members being almost unanimous in favor of the Association retaining its discretionary powers in the matter.

This season the Board sustained a loss in the resignation of Prof. Buckland as Secretary, a position which he had filled most faithfully since the formation of the Board. The work of the Board had now become so great and its functions so extended that

almost the whole time of the Secretary was required to be given to his work, and Prof. Buckland's acceptance of the position of Dean of the University Residence made him feel that in future he would not have sufficent time to attend to the duties of Secretary, and so he felt impelled to resign. On his recommendation Hugh C. Thomson, who had for some years acted as recording Secretary was promoted to the vacant office at a salary of $1,500 per annum. Prof. Buckland of course continued to sit on the Board, being a member *ex-officio*, as the occupant of the chair of Agriculture in the University, and almost up to the time of his death in 1885 he continued to take an active interest in its proceedings as before.

The amount of the prizes offered this year was about $11,000 a little less than in the previous year. The entries were about 5000. The existence of the "Crystal" Palace previously erected, made it possible to provide much more effectually for the housing of the stock and machinery than previously. The quality of the display as a whole seems to have been about the same as the year before, the improvements being chiefly in the minor departments. The manufactured articles on exhibit were exceptionally fine.

The officers elected by the Association for the next year were John Wade, President, and John Barwick and Frederick W. Stone, Vice-Presidents. The Association did not appoint a new Secretary, as such an officer would now have no function distinct from the Secretary of the Board. R L Denison still continued to fill the office of Treasurer of the Association as of the Board. After considerable discussion it was decided to hold the next fair in Hamilton. In his address the retiring President expressed the hope that Canadian industries would be given a great impetus by the recent proctective enactments.

The first meeting of the Board in the year 1860 was held in Toronto on the twenty third of February. The membership of the Board remained the same, Messsrs Alexander, Thomson, Ruttan and Denison the retiring members having been re-elected. In fact the practical certainty of the re-election of the retiring members was beginning to be felt as a grievance, it being found almost impossible to secure any change owing to the mode of election. As the members were chosen by the County Societies throughout the Province at large, each Society giving one vote, it was extremely difficult for any new man, however strong his local influence, to secure any measure of support from distant counties, and it was felt by some that there was great danger of the Board getting out of touch with the actual pressing needs of the agricultural community, changing as they constantly were. It was not long, as we shall see, before there developed a general feeling in favour of a change which resulted in the adoption of a quite different method of choosing the members of the Board. We shall have reason to question whether a change was really necessary, and did not, when adopted some years later, result in a loss of prestige to the Board.

At this meeting a communication was received from the Board in Lower Canada inviting the co-operation of the Upper Canada body in holding a grand exhibition of the products of Canadian industry in Montreal, on the occasion of the opening by the Prince of Wales of the new Victoria Bridge. This invitation had to be declined as it was evident that no suitable collection could be made of the products of Upper Canada in the middle of the summer. In view however of the probability of a visit by the Prince to the fair at Hamilton, it was resolved to put forth special endeavors to make this the greatest fair yet held. In this design as we shall see the Board was more than successful, for not only did the exhibition of 1860 surpass all its predecessors, but it was not again equalled in some respects for eleven years.

The usual number of communications came up for consideration and were disposed of. In view of the frequency with which the Board was consulted about drainage, and asked to take action in the matter, it was resolved to publish some information upon the subject, and the report of this year contained an exhaustive paper on "Thorough Drainage" by H. J. Boulton Esq., of Etobicoke. Some discussion as to proposed changes in the constitution also took place at this meeting. During the year numerous recommendations were received from the county societies with regard to these changes, showing an

awakening of public interest which gave promise that whatever amendments should be made would be such as to meet with popular approval.

It was announced to the Board by Mr. Hutton, Secretary of the Bureau of Agriculture, that the government proposed to hand over $10,000 of the amount appropriated for the entertainment of the Prince to the Association, that the display at Hamilton might be made as representative as could be, in order to give as fair an impression as possible of the resources and development of the Province to the Prince, whose visit to the exhibition was now assured. Half of this amount was handed over to the local committee to provide for suitable decorations.

A matter of great importance which came before the attention of the Board this year was the consideration of what action should be taken with regard to the disease of pleuro pneumonia which was making terrible ravages among cattle in the State of Massachusetts. It was felt that it was of the utmost importance that the contagion should be kept out of Canada, and a committe was given power to take any measures which might seem advisable.

The reports received this year from the county societies showed that again a fair measure of success was beginning to attend the efforts of these organizations to promote more skilful breeding, more care in the selection of seeds and in general more scientific and methodical farming. Especially exhaustive reports are given from the counties of Brant, Dundas and Bruce. The advantages of the publication in permanent form of these reports from the local directors and essays on different counties submitted for the prizes offered by the Board, become more and more apparent as we peruse the reports from year to year. The agricultural capabilities and aptitudes of each locality are carefully analysed, and the progress made from year to year detailed with an accuracy which makes them as instructive for the practical farmer, anxious to improve in his profession by the ideas of others, as they are invaluable from a historical standpoint. In a necessarily brief account, as is the present, of the history of its chief executive body, the internal developement of agriculture in the Province can only be touched incidentally, but for an exhaustive and rational account of the history of agriculture itself in this country, should such ever be undertaken, we have here an extensive fund of material, the result of careful observations made each year by men of competent judgment, actively engaged in the practice of agriculture themselves.

That the exhibition of 1860 would be the greatest yet held was a foregone conclusion. The event surpassed perhaps the hopes of the most sanguine. Fifteen thousand dollars was offered in the prize list, $12,000 actually awarded, amounts half as great again as in the year before, and not again equalled until the fair at Kingston in 1872. The number of entries was over 7,500.

The display was a grand one in every respect, and well suited to give the royal visitor a fair impression of Canada's capabilities as an agricultural country. The chief point that we find noticed with regard to the stock exhibited is that while some of the animals shown in previous years could hardly be surpassed, this Exhibition afforded abundant proof that the good stock in the Province was no longer confined to a few breeders, a result which reflected great credit on the efforts of the Board of Agriculture and the other societies, which had made such general improvement their aim. From the display of implements it was evident that American manufacturers had now ceased to compete for the Canadian markets almost entirely (driven out by the quality of the articles made in Canada), a most encouraging state of affairs. The grain, fruit, vegetables and roots exhibited formed collectively a display which could probably not be equalled elsewhere in the world, and particularly attracted the attention of the Prince.

Of this exhibition, as of some succeeding ones, we have an exhaustive account from the pen of Mr. Wm. E. O'Brien. An interesting feature lately begun by the Board was the publication, along with the report of the fair, of statements by the successful competitors as to the conditions which had prevailed and the modes of operation which they had adopted in preparing or rearing their exhibits, and getting them ready for exhibition.

In his address the retiring President of the Association dealt with the old subject of scientific cultivation, showing in a convincing way the fallacy of the popular misunderstanding of and aversion to "High Farming," as it was called. The new officers elected were John Barwick, President, and F. W. Stone and Asa A. Burnham, Vice-Presidents. London was chosen as the site for the next fair.

At a meeting of the Board in December an address and testimonial were presented to Prof. Buckland, who as above noticed had resigned the secretaryship of the Board, which he had held since its foundation, as a tribute to the manner in which his services and personal worth were appreciated by the other members. Prof. Buckland, as has been said, still remained a member of the Board, and for many years continued to be one of its most active and useful members.

With the transactions of this year, in addition to the extensive county reports already noticed, was published a further essay on Drainage, by Mr. Geo. Smart, of Bowmanville. This was a subject of greatly increasing importance to the Canadian farmer at that time, as the growth of population made necessary the clearing up of much new land, and the occupation of a good deal that was not as well drained by nature as that first taken up.

The retiring members having been re-elected, the membership of the Board for 1861 was the same as before, viz.: E. W. Thomson, Hon. Adam Fergusson, Wm. Ferguson, Hon D. Christie, R. L. Denison, A. A. Burnham, Hon. G. Alexander, and Hon. H. Ruttan. Dr. Beatty and J. E. Pell represented the Board of Arts and Manufactures. E. W. Thomson and Hon. A. Fergusson were re-elected President and Vice President respectively.

The business transacted by the Board this year was chiefly of a routine nature, managing the affairs and settling the disputes of the various agricultural societies, and superintending the arrangements for the exhibition. The local committee at London, by too profuse expenditure on the buildings, involved itself in debt to the amount of $3,500, and on the petition of the mayor and corporation, the Board advanced the amount, taking a lien on the buildings as security. The prize list was of course somewhat reduced from that of the preceding year, but left larger than on any previous occasion, some $12 000 being offered. Special attention was this year given to sweepstake prizes, which were greatly increased both in number and amount.

To secure permanent offices, the Board contracted for the lease of a plot of land on the corner of Queen and Yonge streets in Toronto, and appointed a committee to prepare plans and specifications for the erection of a suitable building.

The stables in which it had been proposed to establish the veterinary college having been appropriated for military purposes under a requisition from the Minister of Public Works, a committee was instructed to make temporary provision for the accommodation (on his arrival in Toronto) of Mr. Andrew Smith, who had been appointed instructor on the recommendation of Prof. Dick, of Edinburgh.

The returns from the county societies this year were for the most part unfavorable, the comparative failure of the crops making it difficult to secure funds for exhibition purposes, or even to arouse any general interest among the societies.

The same cause operated against the success of the London exhibition as well. When we consider this, and also the fact that at that time, instead of being as now almost in the centre of the best agricultural district in the Province, London was rather outside of the stock raising district, it is a matter of surprise that the fair was as good as it proved. In stock the falling off was manifest in little but the quantity exhibited, as many of the animals which had won prizes on previous occasions were present, but in the display of the orchard, garden and field the effects of an unfavorable season were evident to a much more discouraging extent. Still, comparing this with former fairs, other than the one at Hamilton in the preceding year, there were many points of advance, and the entries totalled over 6,000.

The address delivered by Mr. Barwick dealt chiefly with economic subjects of interest to Canadian farmers. He remarked upon the fact that the previous year, 1860, was the first in the history of Canada in which the exports had exceeded the imports.

At the meeting of the Association, F. W. Stone was chosen President for 1862, and A. A. Burnham and James Johnson, of London, Vice-Presidents. It was decided to hold the next fair in Toronto. It was recommended that steps should be taken to have Canada suitably represented at the World's Fair, which was expected to be held in London in 1862. After some discussion the Association resolved to request the Board to notify the societies in each electoral district to send one delegate each to a meeting to be held in Toronto before the next sitting of Parliament, to consider certain proposed amendments to the Agricultural Act embodied in a bill laid before that body at the last session, and to determine upon any amendments that might seem to be in the interests of the agricultural population.

In accordance with the above resolution, a meeting of delegates from the county societies was held in Toronto, on January 30th, 1862. Besides most of the members of the Boards of Agriculture and Arts, there were present delegates from forty societies. Col. E W. Thomson, President of the Board of Agriculture, was appointed chairman. And after a brief address, explaining the reasons for calling the meeting and what was to be considered, opened the meeting for discussion.

The two points which excited most attention, were the proposals to do away with the Provincial Agricultural Association, leaving its work wholly to the Board, and some proposed changes in the mode of electing the members of the Board. The separation of the Boards of Agriculture and Arts was also discussed.

Without much deliberation it was decided that the Association should continue to exist, as it was felt that the yearly meetings of its members served to keep the Board in closer touch with the agricultural community at large. In regard to the election of the members of the Board, there had been a growing feeling that under the existing system the Board was too apt to become a close corporation, it being extremely difficult for a new candidate to secure any sufficient support in distant parts of the Province to enable him to replace any existing member. The new Bill proposed that the Province should for this purpose be divided into twelve districts, from each of which a member should be elected by the votes of the societies within its limits, the society in each electoral district having one vote. In discussing this, several other methods of appointment were suggested, and it was finally resolved to recommend that each society should elect two delegates, in each year, who should meet during the exhibition, and choose an executive of twelve men, and these should form the Board for the ensuing year. The ex-officio members were left as before, it being decided to retain the connection with the Board of Arts and Manufactures.

A committee was appointed to draft a Bill in accordance with the resolutions of the meeting, and the convention was adjourned.

This year the long contemplated veterinary school was at length established, with Mr. Smith in charge. The board having, as we have already noticed, been deprived of the premises in which it had purposed having the work done, a temporary site was secured on Temperance street, and work begun there. This year also witnessed the completion of the Board's new office building on the corner of Queen and Yonge streets, in Toronto, where the offices of the Board have been situated from that date until the building was destroyed by fire early in 1895. The first flat of the building was leased to James Fleming, the seedsman of the Board, who advanced a considerable sum to the Board for the completion of the building.

At the seventeenth annual fair, held in Toronto, in September of this year, the number of entries and amount of prizes was about the same as in 1861. In quality the exhibition was a good deal superior to that of 1861, more nearly equalling that at the Hamilton Fair, in 1860. A more favorable season afforded a much better display of farm products also than had been seen in the preceding year, and the exhibits of machinery

was, as the rule at the Toronto fairs, a prominent feature. The exhibition was visited during the week by Lord Monk, the Governor-General.

Kingston was fixed as the site for the fair of 1863, and A. A. Burnham chosen President, and James Johnson and J. C. Rykert, of St. Catharines, Vice-Presidents for the year. A committee was appointed to revise the by-laws of the Association.

In the year 1863 the Board was composed of the same members as in the year before, with the exception that Dr. Richmond, of Gananoque, had been elected in place of Hon. A. Ferguson, deceased. The Board of Arts was represented on the council by Dr. Beatty and Mr. Rice Lewis

One function of the Board, which was demanding a constantly increasing amount of its time and attention, was its position in relation to the local agricultural societies throughout the Province, for which it acted as a sort of executive head. The increase in the number of township societies gave rise to confusion and numerous disputes by which the Board, in its capacity as arbiter, was severely taxed. The proper apportionment among these societies of the Government grant also involved yearly growing difficulties and complications. At almost every meeting an immense mass of correspondence from the societies had to be considered, one constant trouble being that rival societies would start in the same constituencies, each claiming to be legally organized and so entitled to the share of the Government grant assigned by the Board to that district.

The Board still continued its efforts to promote the cultivation of flax in the Province, and gave during this year some assistance to Mr. Donaldson, of Weston, the most extensive flax grower in the country, in exhibiting some new machines for its treatment, which he had introduced.

A most important step taken this year was the decision to print and publish a Shorthorn herd book on securing the promise of a certain number of subscribers among the breeders. This move was becoming almost necessary, as numbers of inferior animals were being used for breeding purposes throughout the Province, owing to a want of knowledge on the part of customers as to their pedigree.

It having been decided one or two years before, for various reasons, to give up the maintenance of the experimental farm, negotiations were entered into by the Board for its return to the University authorities. The lectures in agriculture were of course continued, and the Veterinary School was this year got into good working order.

It could scarcely be expected that an exhibition held at Kingston would equal one at Toronto or Hamilton, since the great change in the agriculture centre of the Province which the rapid settlement of the western portion had been effecting. So we are not suprised to find this year a considerable falling off, not only in the number of entries, which had dropped to 4,700, but even in the general quality of the articles exhibited, especially was this the case with fruit, the production of which was almost confined to the west, for, owing to its perishable nature, few growers were willing to undertake the expense and risk of shipment. These considerations, however, do not seem to have had any material effect in increasing the sentiment in favor of establishing the fair permanently in one of the larger cities, for it was seen that this fair had a stimulating effect on the part of the Province in which it was held, and it was felt that one of the chief advantages of having the exhibitions in charge of a Provincial Board, was that care was taken to benefit all portions of the Province, and not only those which were already more fortunate from an agriculture standpoint. It was felt that if the fair were located permanently in one place, it would tend to become largely a mere speculative enterprise on the part of that city and the surrounding district.

In his address before the Association this year, the retiring President, Hon. A. A. Burnham, called upon the farmers of the county to shake off their lethargy, and learning thus much from the other professions, make a determined effort, each for himself, to make a success of his own by learning all about it that he could. He advised farmers to keep their sons on the farms by giving them every chance to improve themselves there, not drive the ambitious away by denying them all chance if they remained. In other

professions sons were expected, with additional advantages, to excel their fathers; in this they were scarcely supposed to try so to do. Referring briefly to stock-raising, he reminded farmers that a good and well-bred animal could be raised as cheaply as a poor one, and would sell for twice the money.

For the next year James Johnson was chosen President, and J. C. Rykert, of St. Catharines, and N. J. McGillivray, of Glengarry, Vice-Presidents. It was decided to hold the next fair at Hamilton.

The county reports received this year showed the crops generally to have been good. Increased attention was everywhere being given to land drainage, and as a result, partly as a cause, the cultivation of spring crops was increasing. Farmers were beginning to realize by experience what they had been so often told, that the almost exclusive cultivation of fall wheat could not go on for ever.

Owing to some difficulties raised in the Lower House, the new agricultural statute, recommended by the convention of 1862, had not yet become law, and the Board still continued to be elected as before. Accordingly in 1864, the nineteenth of the Association's existence, we find the Board composed of the same members as before: Hon. Messrs. Christie, Alexander, Burnham and Ruttan, and Messrs. Thomson (President), Ferguson, Denison and Richmond. Along with these sat James Johnson, President of the Association, Dr. Beatty, President of the Board of Arts, and Prof. Buckland. And despite the force of the arguments which were urged against the method then followed in electing the Board, it is more than doubtful whether in later times when a different method had been adopted which gave a greater chance to men of local popularity, there has ever been seated on the Board a body of men so thoroughly representative as well of practical agriculture as of all that is progressive in it, or who commanded a greater share of public confidence from the Province at large. Certain it is at any rate that the eminent men who during these years controlled the affairs of the Association were in every way well fitted to conduct the complex business which came under their consideration.

In this year some suggestions seem to have been made that it was owing to the influence of the Board that the changes in the agricultural statute recommended by the convention had not been made, but from any such charge the Board completely cleared itself, and it was pointed out that it was in the popular house the bill had been defeated, while in the upper house in which the Board had much greater influence, and in which several of its members sat, the bill had been carried without difficulty through their efforts.

The reports of this year showed that progress was still being made in most of the various lines of agricultural work, under the supervision of the Board. New township societies were constantly applying for incorporation, in fact in an increasing number of cases the Board was troubled by conflicting claims of overlapping or rival societies within the same limits. In such cases a rule was laid down by the Board that unless very special considerations seemed to interfere, the older society should be the one officially recognized. It was also found necessary to decide that one township could not receive aid from more than one electoral district.

The amount offered in prizes for the Provincial Fair continued about the same, something over $12,000. Some changes and additions of importance were however made. A combined reaping and mowing machine valued at $150 and donated by Mr. Joseph Hall, of Oshawa, was offered as the first prize at a provincial plowing match to be held in the fall. This, with the other valuable prizes offered by the Association, elicited an amount of competition at this event which made the plowing match of this season one of the most successful on record. This year also prizes were for the first time offered for Angus cattle and for Shropshire Down sheep.

During the previous year Hon. George Brown, who had established himself in the front ranks of Canadian journalists, announced his intention to begin the publication of a new agricultural paper, the *Canada Farmer*, and to use all the excellent facilities in his possession to make it a first-class journal. Accordingly the Board considering that in this line competition would have a decidedly weakening influence, decided to part with

the good will of the "Agriculturist" to Mr. Brown, and make the new journal in future the official organ of the Board. Thus this paper which had for so long, under the able management of Hon. William McDougall and the Board, exercised such an amount of influence in agricultural circles, passed out of existence to make way for the wider sphere of the new publication.

Provision was made this year for the examination of those students who had taken two full courses of lectures at the veterinary school, or who had attended four winter courses. On their proving their efficiency a diploma was granted by the Board, which entitled them to practice in Upper Canada.

The work of preparing the Shorthorn herd book which it had been decided to issue, was taken up energetically, a sufficient guarantee of success having been already secured. In conjunction with the Canada Company, steps were this year taken to have specimens of the prize produce shown at the fair, shipped to the South Kensington museum in London, England.

The number of entries for the exhibition at Hamilton was nearly 6,500. The quality of the exhibits was much the same as usual, some inferiority in the agricultural produce shown being no doubt due to the fact generally complained of in the reports from the county societies that a very dry season had resulted in the crops being rather below the average.

To the address of the President, James Johnson, we are indebted for an exhaustive comparison of the productive powers of Upper Canada and those of the neighboring States, which we cannot here enter into fully, or more than to state that at that time this Province had a much larger production per capita than New York, Ohio or Indiana, of every class of grain except Indian corn, to which as it was largely used for fodder, the extensive Canadian root crop acted as an offset.

During the summer of the following year, 1865, a considerable amount of correspondence was carried on between the Board and the Department of Agriculture, of which Hon. T. D. McGee was now the head, with regard to the condition and working of the Board and the various agricultural societies. The minister felt that the department was out of touch with the agricultural interests of the country and was anxious that it should be partially re-organized and brought into closer relation with the Board, and through it with the local societies.

In the course of its communications with the Government upon this subject the Board took occasion to vigorously urge the general desire for some change in the manner of electing the members of the Board. No change, however, was made in accordance with these recommendations as yet.

In addition to continuing its efforts to promote the cultivation of flax, some attention was this year given to the possibility of the cultivation of sorghum in Canada, and on the suggestion of Mr. Alexander it was resolved to offer prizes for sugar and syrup manufactured from this article.

It was decided that a new course of lectures should be delivered by Prof. Buckland before the county societies, with a view to bringing them into closer connection with the Board and securing on the part of each a better knowledge and appreciation of the work of the other.

The exhibition was this year held at London. The prize list was not much changed, a few extensions raising the amount to $13,500. For the first prize at the plowing match Mr. Hall this season gave a clover separator valued at $300. The stock was about the same and the farm produce somewhat better than in the year previous.

The address of the president, Mr. Rykert, was devoted chiefly to a few practical considerations with regard to the proper education of the farming classes. He called attention particularly to the need of some sort of agricultural education in the rural schools. He also made a few remarks about the proper conservation of the fertile properties in the soil, mentioning some crops which rested the soil while none the less profitable in themselves. During this summer the Board, and agriculture at large throughout the country,

had suffered an irreparable loss in the death of Colonel E. W. Thomson, the pioneer promoter of agricultural organization in the country, the first president of the Provincial Association and who had filled the chair in the Board from its institution in 1851 until his death. In his life ever at the front of every cause which had for its watchword advance and improvement, he died honored and mourned, not only by those for whom his lifework had chiefly been done, but by every honest and patriotic citizen of his country. A suitable resolution recognizing his services was adopted by the Board.

The transactions of the year 1866 involve little besides the ordinary routine business of the Board. The two new members chosen to the seats left vacant by the deaths of Colonel Thomson and Hon. Mr. Ruttan were F. W. Stone and J. C. Rykert, both of whom having held the presidency of the Association, were already well acquainted with the work of the Board. Mr. N. J. McGillivray also had a seat as president for this year. Some embarrasment was caused during the course of the year by the failure of the Bank of Upper Canada in which the Board had kept its funds from the first, and had on deposit at the time of the failure about $16,000. When this was withdrawn a large proportion could only be secured in the shape of bills which had to be disposed of at 70 cents on the dollar. The very satisfactory footing on which the finances of the Board then stood was shown in the fact that this loss interfered little, if at all, with the extent of its operations for the year or even the amount of premiums offered, which this year came to about $13,000.

One marked feature of the year was the suddenly increased interest which seemed to be taken in the local societies throughout the Province, a substantial evidence of which was an advance of about $8,000 in the amount subscribed for the purposes of these societies by members. As the annual fee was in most cases small this must have represented a very large increase in the membership.

At the fair at Toronto both the attendance and the receipts were large as was usual there, but the only point in which the exhibits in that city much surpassed those at the other places where the fair was held was in the arts department. It was in taking good stock to different parts of the Province and so encouraging its production in every part that the peripatetic system of holding the exhibitions did its greatest amount of good, and the result was seen when in after years each district was able of itself to organize and maintain a fair of almost equal magnitude.

In Mr. McGillivray's address attention was called to the advisability of carefully finding out and rearing the kinds of grade stock most suited to the climate and requirements of Canada, a consideration which, as pointed out, was too apt to be overlooked in a too enthusiastic devotion to thoroughbred stock.

For the year 1867 John P. Wheeler, of East York, was chosen President of the Association. Of this year the most important event from the standpoint of our work was the holding of a second convention to decide upon certain proposed changes in the constitution and functions of the Board. The resolutions of the convention of 1862 that the manner of electing the Board should be changed, had as we have seen been fruitless, but there now seemed again some feeling that a change should be made, and accordingly it was resolved to hold another meeting. In fact, as we have suggested, as long as there was only one Legislature for the United Provinces the relations between the Government and the agricultural interests had never been satisfactory, and great difficulty had been found in making an Agricultural Act which would work satisfactorily for both Provinces. In view of the probability that the Province would now have a Legislature of its own, it was felt that a decision should be come to as to what was the feeling on these matters and what changes would be generally acceptable. So to this convention were summoned the members of the Board and one delegate from each electoral district society, each incorporated Horticultural Society and each Mechanics' Institute. The chief change which it was decided to advise was one by which the membership of the Board should be increased to twelve, as had been resolved by the previous convention. But the method of election now advocated was a direct choice by the county societies at their annual meetings, and this we shall see was substantially adopted in the

new Act. The other extensive changes introduced by the Act, by which so many functions were taken away from the Board and given to the Government, do not seem to have been proposed at all in the convention.

During this year, after several years' labor in preparing the data already on hand and collecting new registrations, the first volume of the Canadian Shorthorn Herd Book was issued. The standard adopted was the English one, by which animals were admitted having four crosses by pure-bred males. As time went on and the quality of the stock in Ontario was improved, we shall see that this became unsatisfactory, and it was found necessary to raise the standard so that only animals of wholly pure descent should be admitted.

The fair at Kingston developed no special features. The entries, as was usual in that district, were somewhat fewer than when the fair was held in the west, the falling off being, of course, chiefly in fruits, vegetables and such products, in which the western part of the Province was considerably in advance, and which it did not pay to transport a long distance.

In the next year a splendid example was given of the advantages afforded by the system of agricultural organization in Ontario. A disease known as the "Texas cattle plague" or Spanish fever broke out somewhere in the United States and spread rapidly among the states along the border, committing fearful ravages among the stock wherever it reached. Promptly upon hearing of the disease the chairman of the Board, Hon. David Christie, by telegraphic communication with the Minister of Customs, secured an order prohibiting the transport by Canadian railways of cattle from the western states. An emergency meeting of the Board was called by telegraph, which ratified the measures of the president and ordered the most stringent precautions to prevent the contagion reaching Canada. The value of this promptitude was shown in the fact that one or two cases were actually reported along the lines where cattle had been carried previous to the order. These were however quickly isolated, and the plague gained no foothold in Canada. At the same time a committee of competent men was delegated by the Board to visit some of the scenes of the contagion and make a report upon the nature of the disease Their report was a most valuable one, and when approved was published with the volume of the year's transactions.

The exhibition at Hamilton again showed some advance, and the number of cattle entries was over 6,500, more than in any previous year except 1860. The annual address was delivered by Mr. Thos. Stock. This gentleman was the last president elected by the Association at large, for after the new Act which became law this year came into force, the Board of Agriculture chose each year at its annual meeting a president, who was also to be the president of the Association. Mr. Stock devoted a considerable part of his address to instructing the delegates present as to what would be the duties under the new system of the county societies which they represented.

Part III, 1869-1880.

From the year 1869 until 1881, when the energy of a few men began a new era by the discovery and opening up of new fields of usefulness for the Board and thus materially extending its operations, we have to record what, except in so far as the energetic development and control of the Provincial Fair was concerned, was practically a period of stagnation.

We find that the work of the Board during the next several years was almost wholly confined to the management of the Provincial Exhibition, together with a partial supervision of the Veterinary College and some work in keeping up the registration of Shorthorn cattle. Of any more extended work such as had been performed in the past, and such as still might have been discovered notwithstanding its contracted functions, we have been able to find scarcely any trace. To what extent this apparent lethargy is due to the very meagre account of the work of the Board during this period which we have been able to discover, we cannot say, but it is scarcely likely that any ventures of import-

ance would have been overlooked in even the scanty reports which were published between 1871 when the old series of "Transaction" ceases, and 1881 when the Board again began to issue a separate annual report.

In addition to this the new statute assigned to the Commissioner of Agriculture for Ontario some of the most important and extensive functions formerly performed by the Board, and thus greatly contracted the sphere of the latter's duties. By section 2 of the Act there was constituted a Bureau of Agriculture for Ontario, which was to be attached to the Department of Public Works, the head of the Department to be known as the Commissioner of Agriculture and Public Works. We may here recall the fact to which attention has already been called, that while there existed a Government Department of Agriculture prior to Confederation, it had never succeeded in getting into close relations with the agricultural interests of the country, in fact it had for the most part been somewhat disorganized, as we have seen was felt by one at least of its ministers, Hon. Mr. McGee. This of course was largely due to its holding the same relation to the agricultural organizations of two Provinces, the needs and the scope of the work in which were essentially different. Whatever it had from time to time performed, outside of the office and statistical duties pertaining to it, had been mostly done through the agency of the Board, and thus this body had up to this time been practically the executive head of agriculture in the western province. Whenever, too, there had arisen any special emergency, which seemed to menace the agricultural interests of the country, it was the Board that had to initiate and carry out any preventitive or remedial action required. That it was able to execute these duties in the efficient manner in which it had performed them was due to the fact that for the most part its members were men of a good deal of political and administrative experience, and who, owing to the mode of their election, necessarily commanded the confidence of the Province at large.

Of the administrative functions which had fallen to the lot of the Board in this way the most important was by the new statute taken away. It was enacted that in future the annual reports from the county and township agricultural societies should be made direct to the Commissioner of Agriculture, and their grants made direct through his department. The regulation of these bodies and the settlement of their difficulties and disputes had up to this time been one of the most extensive and most onerous duties of the Board.

In addition to this all practical connection between the Board and the Arts Societies, or Mechanics' Institutes into which they were now changed, was done away with by the new Act, though representatives from these and other societies continued to be associated on the council of the Association, for exhibition purposes.

One other change introduced by this Act we have also to notice, though we have already anticipated it. It was enacted that in future the Board should consist of twelve members. For the purpose of their election the Province was divided into twelve districts, from each of which a member was to be elected by the votes of the Electoral District Societies within its limits. Four of the members were to retire annually and their places were to be taken by four others chosen in the same way.

With its field of operations thus restricted, and its membership thus changed, the Board, or the council of the Agriculture and Arts Association as it now came to be more generally designated, on account of its performing only those functions which had formerly belonged to that body as distinct from the broader duties of the Board, contented itself for some years with the contracted sphere thus imposed upon it, at no time moving much out of the specific round of duties assigned it. And not for about ten years, until after three or four elections in each district, when the constituencies had been enabled in a manner to decide upon the best men to represent them, such as could be permitted to sit in the council long enough to gain some experience, when the membership of the council had thus become somewhat settled and some continuity given to its counsels, did it begin again to see far enough to realize the magnitude of the work that still remained to be done for agriculture, and the sphere not of option but of duty opened up to it by the clause which still gave it power "Generally to adopt every means in its power to

promote improvement in the agriculture of the Province." And then at length the activity and energy of a few men discovered that many ways still existed in which the Agriculture and Arts Association could nobly fulfil this injunction, and still confer the most signal of benefits upon that most important of industries which it once had wholly in its charge.

The council for 1869, the first elected under the new system, was composed of the following gentlemen: George Macdonell, Cornwall; Hon. J. Skead, Ottawa; Andrew Wilson, Maitland; Edwin Mallory, Napanee; John Walton, Peterborough; George Graham, Brampton; James Cowan, Waterloo; J. C. Rykert, M.P.P., St. Catharines; Hon. David Christie, Paris; Robert Gibbons, Goderich; Lionel E. Shipley, Falkirk and Stephen White, Charing Cross. The first meeting was held on February 24th, and Mr. Mallory chosen President for the year.

In the previous year the council had had some dispute with its treasurer. As a result of this trouble he resigned his position, and one of the first duties of the council this year was to elect a new treasurer. The choice fell upon Mr. George Graham of Brampton. The salary was fixed at $400 per annum. The responsible duties of this office Mr. Graham performed faithfully from the period of his appointment until the time of his death in the year 1894. At the same time a by-law was passed specifying the duties of the treasurer, and fixing the amount of the security which he should be required to furnish.

In view of the danger in which the country had stood in the previous year from the ravages of the cattle plague along its borders, and from which it had only been saved by the prompt action of the Board, a memorial was this year drafted by that body and sent to the Dominion Parliament, praying for permanent and effective legislation to meet any such emergency that might arise in future.

The exhibition at London was successful. Interest was added to the occasion by the visit of His Royal Highness Prince Arthur and Sir John Young, the Governor-General, to whom addresses were read by the President, Mr. Mallory. About $13,500 was offered in prizes.

The council interested itself this year in the experiments of Mr. Arnold of Paris, in the direction of hybridizing samples of wheat to be used as seed, it being claimed that in this way wheat could be rendered proof against rust and blight. The first experiments proving successful, a pecuniary grant was made to assist Mr. Arnold to extend his operations in this direction.

The only change in the personnel of the council of 1870 was due to the election of Mr. James J. Farley, of Belleville, in place of Mr. Mallory. The exhibition was held in Toronto, and was attended with the full measure of success which the fairs in that city always met with.

The address of the President, Hon. D. Christie, delivered at this fair, contained a brief description of the conditions and standing of agriculture at different periods of the world's history, from which he drew the deduction that agriculture was always more profitable and farmers more independant and prosperous when small farms were cultivated instead of large ones.

One more was this year added to the list of concessions and encouragements by which the Association had from time to time throughout its existence endeavoured to advance the breeding interests of the country. The council this year succeeded in prevailing upon the Dominion Government to enact that in future a rebate should be made of the duty collected on animals imported for breeding purposes. The thanks of the council were voted to Jas. Young, M.P., of South Waterloo, for his efforts in securing the adoption of the measure.

A valuable feature which was now inserted in the annual report was an analysis of the amount awarded at the exhibition, showing what proportion had gone to exhibitors from each county. After one or two such returns had been published it was seen how in each year that proportion of the Province in which the fair was held received a much

larger part of the total award than when the fair was held elsewhere. Averaged for four successive years in which it had visited every part, these returns afforded a very fair basis for agricultural statistics and for a comparitive view of the resources of the various counties in the Province.

The report from the Fruit Growers Association, published in the transactions for 1870, and that from the Entomological Society are both of great interest. To the latter body the council this year made a grant to enable it to illustrate its report with suitable woodcuts.

For the year 1871 Nathan Choate, Esq., of Port Hope, and George Murton, of Guelph, succeeded Messrs. Walton and Cowan on the council, otherwise the members were the same as before. Hon. Mr. Skead was chosen president.

During the summer, arrangements were completed for the final transfer of the old experimental farm and the buildings thereon which the board had erected, at a valuation for the latter, to the University of Toronto from which the grounds had been originally leased.

Having called the attention of the United States Government to an inequality in their customs regulations, by which stock imported into that country for breeding purposes from across the seas was admitted free of duty, while animals imported from Canada for the same purpose were not included, the council succeeded in obtaining a ruling by which the same privilege was in future to be extended to Canadian stock, of which a considerable quantity was now exported for this purpose.

The fair was held at Kingston, and was visited by the Governor-General, Lord Lisgar, and the Lieutenant Governors of Ontario and New Brunswick. A substantial increase was made in the prize list, the amount offered being about $15,500. In his address to the members of the Association, Mr. Skead called attention to the proposal that the government should assume the control and management of the Association, and pointed out that Mr. Christie had advanced conclusive reasons why this should not be done. He also remarked how successfully the sugar beet was being cultivated in some parts of Canada, and advised that more attention should be given to this in future.

The year 1871 as has already been noticed, was the last in which was published the old series of transactions of the Agriculture and Arts Association, the first volume of which had been issued in 1856. For the next ten years, until 1881, when under the supervision of the new secretary, Mr. Wade, the records of the Association again began to be issued in a separate volume, we have only the most incomplete account of the transactions and work of this body. Each year during this interval a report was presented by the Commissioner of Agriculture to the Crown, appended to which we have a report from the Agriculture and Arts Association, one from the Fruit Growers' Association, from the Entomological Society, from the new Agricultural College, and in general from each of the bodies which the government has under its more or less direct supervision. The account of the proceedings of the Agriculture and Arts Association in particular, is very meagre, being confined almost entirely to a description of the annual exhibition, with a short, yearly account of the progress of the Veterinary College. We have no record whatever of the minutes of the council, in several years we are not able even to determine who were its members, and the private records of the council from which we might have been able to get these particulars have all been destroyed The names of the presidents are arrived at only incidentally, attached sometimes to short formal addresses presented to distinguished visitors at the fairs, or to the annual addresses which are sometimes quoted.

On the other hand we shall see that such work as the Association did engage in during these years was thoroughly and successfully performed. The Veterinary College was maintained with an efficiency which the energy and ability of its principal and his assistants has made it the foremost institution of its kind in America, and the Provincial exhibitions continued to grow in magnitude and increase their influence despite the competition in the latter years of the decade of rival corporate enterprises of the same kind. In addition to these the council gave its attention to the publication of several

more volumes of the Shorthorn herd book ; the registration of Ayrshire cattle was begun in 1872, and of Berkshire swine in 1876. It was in this sphere especially that there was room for good work on the part of the council, but it was not really opened up, as we have already said, until after 1881.

For the year 1872 the elected members of the council were Messrs. Archibald McNab, Hon. James Skead, Andrew Wilson, Irvine Diamond, Nathan Choate, George Graham, George Murton, J. C. Rykert, M.P.P., Hon. David Christie, Robert Gibbons, Lionel E. Shipley and Stephen White, for the twelve respective districts in the order named. Mr. H. C. Thomson continued to act as secretary to the Association, and Mr. George Graham as treasurer. Stephen White, of Charing Cross, was elected president for the year. In addition to conducting the business of the fair, preparations were made for issuing the second volume of the herd book.

The fair this year was held at Hamilton, and was in every way a success. The number of entries was nearly 8,000, and it was observed that among these entries each year a smaller number of inferior articles was entered in competition, and thus, though the prize exhibits of former years could in many cases perhaps scarcely be excelled, a marked improvement was constantly going on in the general quality of the display.

In connection with what has been said with regard to the change in the system of dealing with the local agricultural societies, it may be observed that in his report this year the commissioner has cause to complain of the delinquency of many societies, which neglected to send in their reports to him, in accordance with the circular issued from the Department. From several of the best counties it appears that no answer at all had been received.

In 1873 there were two changes in the membership, Messrs. Ira Morgan and J. B. Aylesworth taking the places of Messrs. Skead and Diamond. At the first meeting Mr Andrew Wilson, of Maitland, was chosen president for the year. Better financial terms having been secured the account of the Association was transferred from the Bank of British North America to the Bank of Commerce. Early in the year preparations were begun for the issue of the third volume of the Shorthorn book.

In the interests of the fruit growers of the Province, and to remedy what had previously been a source of a good deal of annoyance, a resolution was passed requesting the Dominion Government to make the standard apple barrel the same size as that in use in New York State.

In accordance with a resolution of the council, the Ontario Government this year assisted in the formation of a Provincial Dairymen's Association. From the first this institution was successful, and interesting reports of its progress appear yearly in the volume issued by the Agricultural Department.

An innovation, so far as Ontario was concerned, which was introduced this year in connection with the exhibition, was the employment of steam power to drive the various articles of machinery shown. This device had long been contemplated, but had been slow in becoming realized. The fair itself, held at London, was decidedly the best yet conducted by the Association. The number of entries was over 8,900, 1,100 more than on any previous occasion. In consequence of the keen competition among breeders, even the best animals showed some improvement, and the newly imported ones shown were particularly fine, especially the heavy draught horses and shorthorn cattle. In the long wooled varieties of sheep and in the smaller breeds of pigs special excellence was also noticed. From the display in almost every class it appeared without doubt that the exhibitions were having a markedly beneficial effect in stimulating a healthy rivalry among those who exhibited from year to year, a circumstance which could not fail to result in raising the general standard of stock in the Province.

During this year the sum of $1,200 was set apart by the Board for the holding of four plowing matches in four sections of the Province, each of which included three of the agricultural districts. Our only information as to the success of these is derived from the fact that in the next year a similar grant was made for four competitions, "to be

carried out in the same way as had proved so successful in 1873." As to the utility of these events there can be no dispute, provided they are conducted in a proper manner, and so as to secure a representative amount of competition, and to spread them in this way over the Province was certainly an improvement on the old way of holding one match only for the whole Province, which was of local advantage only. The method now adopted was to change the locality each time, and with four events each year the whole Province was soon covered.

For the year 1874 we again find two changes in the membership of the council, Messrs. Choate and Murton being succeeded by Messrs. S. Wilmot, of Newcastle, and Thomas Stock, of Waterdown. Mr. Sheriff Gibbons, of Goderich, was elected President.

In conjuncition with the city council, elaborate preparations were made for the fair, which this year was again to be held at Toronto. The expectations raised of its success were not defeated to any very great extent by the drought which this season inaugurated the era of commercial depression, which prevailed in Canada as throughout the civilized world for the next three or four years. The success which attended the fairs held at Toronto was not due to any superiority of the agricultural display over that seen in other centres where it was held—the exhibits of machinery and fine arts were the only ones that evinced any marked superiority at the Toronto shows—but to the much larger attendance which the population of that city made possible. Accordingly whenever the exhibition was held there its financial success was assured from the start. But before long, as we shall see, it became evident that the citizens, who formed the majority of the visitors, wished to pay their admission fees to see a fair rather different in character than that which the Agricultural Association maintained.

The amount awarded in prizes and the number of entries were about the same as in the year before. There was a slight falling off in the number of animals exhibited, but this is attributed even less to the drouth and the financial depression than to the fact so many superior animals were constantly being imported, and such care was now being given to breeding, that only those who had animals of the very finest quality cared to exhibit them. The receipts at the fair were the largest on record, totalling somewhat over $22,500.

An interesting feature of Mr. Gibbons' address was a summary which he read showing the advancement made in the different years in which the exhibition had been held in Toronto. The number of entries it appeared had increased from 1,150 in 1846, to 8,162 in 1874, and the amount offered in prizes from $1,600 to $16,640. In referring to the Veterinary College he called attention to the fact that the graduates from this institution already numbered over one hundred.

Before leaving this year it may be well to remark that during its course there was some discussion as to the advisability of removing the Veterinary College to Guelph, and placing it in connection with the Agricultural College, and at first the council seems to have favored the idea, and actually voted a sum for buildings.

It will have been observed that for a number of years back the exhibition had been held in the four cities of Toronto, Kingston, Hamilton and London in succession. Several times delegates from the eastern counties had endeavored to made a break in this order in favor of Ottawa, but without success, until the meeting of the directors in the fall of 1874, when it was decided that the fair of 1885 should be held in the capital of the Dominion. The wisdom of this move was doubted by many who thought that Ottawa could scarcely be considered as the centre of a good agricultural district. On the other hand it was known that the counties in that district had taken few if any prizes at previous fairs, had been so far removed in fact that they had scarcely sent any articles in competition, and it was felt that the work of the Association should be in reality as it had always professed to be, the encouragement and development of agriculture throughout the whole Province. At any rate, if in an enterprise of this kind the success which attends it is any criterion of its wisdom, it is certain that the most sanguine advocates of holding the fair in Ottawa were not disappointed in the result from an agricultural standpoint.

Chiefly owing to the exertions of Hon. James Skead, a former president of the Association, buildings were erected the most commodious yet provided in any part of the Province. That the inducements might be sufficient to attract exhibitors who resided at a distance, and thus a fair amount of competition secured, the amount offered in prizes was increased to $17,000, and as a result the number of entries was 7,300, only 800 less than at Toronto the year before. The general quality of the exhibits compared favorably with the display at previous fairs, and not a few of the awards were carried off by residents of the surrounding counties, which had been very poorly represented at the exhibitions in other parts of the Province, none of which had been held east of Kingston.

Up to this time, accordingly, the extreme east had lacked one of the most effective incentives and aids in the direction of agricultural improvement which had been enjoyed in other parts of the Province. This led to a much greater amount of interest being taken in the fair by surrounding agriculturists than was now usual in parts in which the fair had been long established. These facts, together with the general success of the exhibition, which was a matter of surprise to many of the members of the council, who had fancied a successful show any place outside of western Ontario to be an impossibility, seem to have allayed for a time the feeling again encouraged by some in favor of locating the fair permanently in some one of the great centres of population, on account of the greater financial returns which this promised. It was felt that such a course, especially if adopted from this motive, would be unworthy of the past record and the high aims of the Association.

The idea of changing the site of the Veterinary College to Guelph would appear to have been abandoned, but in the address of the President, Archibald McNab, M.P., we find it stated that the council, being much interested in the success of the School of Agriculture, had appropriated $4,000 for the erection of a building adjoining that institution for the instruction of the students in the elements of veterinary science, and that this building was now almost completed. The same speaker refers to, as a matter of regret from the point of view of the farmers of Canada, the refusal of the Senate of the United States to ratify the reciprocity treaty laid before it at its last session.

We are glad to find in the report of the Commissioner of Agriculture, attention called to the success which was attending the plowing matches conducted each year by the Agriculture and Arts Association, and the markedly beneficial effect which in his opinion they were exerting on the welfare of the community.

During this year the Council issued the third volume of the Shorthorn Herd Book, which had been for some time in course of preparation.

In the following year, 1876, the Association was deprived by death of its secretary, Mr. Hugh C. Thomson, who since his appointment in 1859, on the resignation of Prof. Buckland, had efficiently performed the duties of this office. In his work he had always been painstaking and thorough, and had always possessed the full confidence of the Board. Mr. John R. Craig, of Edmonton, was chosen to fill his place.

In addition to the management of the Provincial Fair this year the attention of the Council, and especially of its president, Mr. Ira Morgan, was given to securing a representative display of Ontario's products for the Centennial Exposition at Philadelphia. In spite of the continued commercial depression and the comparative failure of the crops in Canada, the collection of exhibits sent over was such as to attract attention on all sides. In the report of the Commissioner of Agriculture it is stated that in the departments of live stock and dairy produce the Canadian exhibits were not surpassed. At an exhibition visited by sight-seers and delegates from all parts of the world, the importance of such a display in attracting attention to the resources of a country so badly in need of a desirable class of immigrants and the investment of foreign capital as was Canada, can scarcely be over-estimated. By the exertions of Mr. Ira Morgan and Hon. David Christie, a collection was made up of upwards of one thousand varieties of seeds for the Association, and duplicate specimens were sent to the Ontario Agricultural College at Guelph.

The removal of some of the best animals and manufactures in the Province to Philadelphia does not seem to have affected much the success of the Provincial Exhibition at

Hamilton, for the quality of the display is said to have been much the same as usual and the number of entries was over 10,000, 1,100 more than in any previous year. This must be regarded as affording abundant proof that, more and more, farmers throughout the country were giving their attention to careful breeding and careful cultivation. The prize list had also been somewhat extended, in all $18,237 being offered. On the whole the success of the fair was very encouraging, and gave abundant evidence that the usefulness of the Provincial was still on the increase.

In the following year, 1877, the exhibition was held at London. The returns showed a slight further increase in the number of entries, and a substantial improvement in many departments, especially in horses and machinery. A better season also afforded a display of agricultural products and fruits considerably superior to that of the year before.

In the address delivered this year by the president, L. E. Shipley, Esq., we find attention called to the fact that Canadian cattle and Canadian beef had already begun to be shipped to England in large quantities, this country thus beginning to receive back the thousand-fold interest which she has gained on the outlay made in importing breeding stock. Mr. Shipley also said that at a recent sale of Canadian shorthorn cattle in England the average price paid for each animal had been about $2,000, some particularly fine ones selling as high as $20,000.

By Revised Statutes Ontario, 1877, chap. 35, it is provided that the number of members of the Council of the Agriculture and Arts Association be thirteen, and the districts from which they were to be elected are re-arranged a little and one new district constituted. The member elected from the new district, number thirteen, was Mr. Charles Drury, of Crown Hill. The names of the remainder of the members we are unable to discover in any of the records.

The exhibition held at Toronto in September of 1878, is pronounced to have been the best yet held by the Association. By an agreement with the Government the city had exchanged the old grounds for a new site fifty-three acres in extent, comprising what was then the garrison common. On these grounds were erected large and substantial buildings, much more commodious than any heretofore provided. Separate buildings were also erected for the displays of several of the most important industries, and still all the available space on the grounds was completely occupied, the number of entries being over 11,200.

The exhibition was formally opened by the Earl of Dufferin, then on the point of leaving Canada on the expiry of his term of office as Governor-General. In reply to an address of welcome delivered by Mr. Thomas Stock, the President of the Association, his Excellency in a few words spoke of the great resources of Canada, the advantages of her free constitution and the political dangers which were to be guarded against in connection with it, and our duty to cultivate friendly relations with the people of the United States as well as loyalty to our Sovereign, concluding with a few words of affectionate farewell to the people of Canada, whom he had learned to regard so highly.

This was the last year in which the Provincial Fair was held in Toronto. The city had now excellent grounds, good shows were popular with the citizens, and it was considered that an annual fair could be successfully conducted in the city. The Agriculture and Arts Association could not be prevailed upon to establish the Provincial Exhibition there permanently on account of the duty which it owed to the rest of the Province, so it was decided to start a fair to be managed by a corporation of directors in conjunction with the city. The striking financial success of the exhibition of 1878 gave every promise of success to such a venture. And in every way the Industrial Exhibition was a direct offshoot of the Provincial. The city remained under an obligation to put the grounds and buildings at the disposal of the Association every fourth year.

It having been resolved to hold the exhibition of 1879 in Ottawa, the idea suggested itself to the members of the Quebec Board of Agriculture of offering to join in the exhibition and give it a Dominion character. The proposal was readily assented to by the Ontario Council, and general interest being aroused a small appropriation was made by the Dominion Government. With its resources so increased the Association was able to

offer $18,500 in prizes. The exhibition was opened by the new Governor General, the Marquis of Lorne, to whom a suitable address was read on behalf of the Association by the President, Mr. Samuel Wilmot.

The display at this fair afforded abundant proof that agriculture was developing rapidly in the eastern part of the Province. The percentage of exhibits from the surrounding district was much larger than at the former fair held in Ottawa in 1875, a circumstance which proved that this fair had exercised a stimulating influence on agriculture in this part of the Province. Some of these exhibits too, were most excellent; the people of the east were beginning to see that there was no reason why they should not compete with their western neighbors in some at least of the departments of agricultural production.

A striking feature at this exhibition was a large and representative collection of the products of the new Province of Manitoba, a venture which well repaid the enterprise of its promoters by drawing the attention of the farmers and investors of Ontario and Quebec to the resources of Manitoba in a practical way which years of verbal advertising could not have accomplished.

This fall the Industrial Exhibition was successfully established in Toronto. The Provincial being so far away, neither interfered to any considerable degree with the success of the other.

In the course of the year Canada was visited by several commissioners sent out from England to report upon Canada's resources and suitability for immigrants, in view of the pressing financial and agricultural distress then prevalent in England. Every facility was granted them both by the Agricultural Association and by the Government, and having viewed the splendid results of Canadian industry displayed at the fairs and seen the abundant crops with which the country was this season blessed, the reports which they published in England drew attention to the possibilities of Canada in such a way as to result in a large influx of immigrants, and also what the country needed perhaps even more, a considerable investment of English capital.

The report of the Commissioner of Agriculture for 1879 advocated the appointment of a commission to consider how the work of the department might be extended and more effectually performed, how the efficiency of the various agricultural societies might be increased, and especially how some means might be provided for the collection and dissemination of reliable agricultural statistics for each year. These matters were accordingly investigated, and in 1882 a new agricultural Act was passed which made some important changes.

Part IV, 1880-1895.

In the year 1880 we have again been able to discover the names of the members of the Council. We find a considerable number of old names, some of the members appear to have gained a standing and a measure of public confidence which secured their re-election throughout the whole or greater part or the subsequent existence of the Council. The elected members for 1880 were: D. P. McKinnon, South Finch; Ira Morgan, Osgoode; Joshua Legge, Gananoque; J. B. Aylesworth, Newburg; John Carnegie, Peterborough; George Graham, Brampton; G. Moore, Waterloo; J. C. Rykert, M.P., St. Catharines; Hon. D. Christie, Paris; William Roy, Owen Sound; L. E. Shipley, Greystead; Stephen White, Charing Cross; and Charles Drury, Crown Hill.

The exhibition was held in Hamilton, and lasted two weeks, in accordance with a resolution passed at the last annual meeting. The experience of this year showed that this period was rather too long, and subsequently the fairs were held during parts of two weeks.

The display of stock was quite up to the usual mark, and in most of the other departments an appreciable advance was noticeable. There was no recently imported stock shown, as in consequence of the prevalence of serious cattle diseases in other countries, an Order-in-Council had imposed a three months' quarantine on all stock brought into

Canada. A novel feature was the exhibit of four different kinds of self-binder, a new invention introduced during the year. The display of fruit was exceptionally fine, but the most marked feature of the whole show was the exhibit of dairy products, the largest and best yet seen in Ontario.

The address of the President, Mr. Rykert, was most valuable and instructive. The progress of agriculture in Canada was reviewed, the conditions and the methods of Canadian farmers compared with what they had been fifteen years before when the same speaker had, as its President, delivered the annual address before the Association. Attention was called to what might still be done to improve these methods, especially by the establishment of some system of elementary agricultural instruction in the rural public schools. Farmers were earnestly invited to observe the advantages of stock and dairy husbandry. In concluding Mr. Rykert quoted a passage from the report of the English tenant farmers' delegates who had visited Canada, in which referring to the excellence of Canada's soil they had said that this alone could have made it possible for unscientific farming to be carried on for so long in the country, but that the time was close at hand when Canadian farmers would find it absolutely necessary to revolutionize their methods of cultivation.

The Veterinary College continued to grow in efficiency, and we find it noted in the Commissioner's report that some of the older graduates had been appointed by the Government as inspectors of live stock in different parts of the Province, their duties being in their own line much the same as those of sanitary inspectors with regard to the public health.

At the annual meeting of delegates, held during the fair, it was unanimously resolved, "That in the opinion of this meeting the Provincial Exhibition, having been largely the means of developing agriculture in the Province, should not be confined to one locality, but should be held in convenient and suitable places in different parts of the Province." This, the opinion of the county delegates to the fair, must be taken as the view of the agriculturists throughout the Province.

The year 1880 was marked by adoption by the council of a new line of work, of which it would appear Mr. Drury was the prime mover. With a view to giving some substantial encouragement to those farmers who were possessed of a laudable ambition to cultivate and manage their land in a more orderly and scientific manner than their neighbors, at the meeting held in March it was resolved to offer prizes for the best managed farms in each of six divisions into which the Province was to be divided for this purpose. The first division, to which the prizes were to go in 1880, consisted of the Counties of Norfolk, Haldimand, Monck, Welland, Lincoln, Wentworth, Halton, Waterloo and Brant. The awards were to be made for general superiority in all the points of successful and scientific farming, a variety of which were enumerated in the instructions which were given to the judges. Local circumstances were also to be considered in determining the relative importance of the various points of excellence or allowing for the absence of some of them.

These competitions, continued from year to year until the Province was covered, excited a great deal of interest and much healthy emulation among careful and successful farmers in the districts from time to time visited by the judges, and could not but promote the giving of general attention to improved agricultural methods and an enterprising system of cultivation. In all cases the work of the judges seems to have been done with the utmost care and fairness, and to have occasioned much less dissatisfaction than might have been expected in a matter where a decision involved so many complex considerations. The move is highly commended in the Commissioner's report for 1881, and it is stated that the successful competitors prized very highly the medals granted to them.

This was the first indication of the new spirit which had begun to animate the council. Its members had come to see that there might be a good deal of truth in what many people had already begun to think for them, that however advantageous an enterprise might be the annual Provincial Fair, the council was much too unwieldy and expensive a body to exist solely for its management. This feeling also led the council itself in

the next year to suggest that its membership should be lessened by doing away with the *ex-officio* members, who had now grown very numerous. The council now began to realize that while the progress of the growing number of local exhibitions, to which the Provincial had given rise, was taking even this gradually out of its hands, and its usefulness in this sphere, great as it had been was nearing an end, its work was still by no means accomplished; that before the Agriculture and Arts Association of Ontario should pass away there were still other fields to be opened up; and not until this was done, and all the various lines of work which the interests of agriculture demanded, should be established, as were the exhibitions, on a firm independant footing, could it be felt that the usefulness of the Association had ceased. And in this connection too much cannot be said of the work of the man who early in 1881 was chosen secretary of the Association. To Mr. Wade more than to any other one man is due the development of the work of the Association since that year. It was left for him to discover that the real work which the council had yet to do, was in a line which up to this time had been approached from one side only. We have seen how, as early as 1854, the Board of Agriculture, had opened a series of stock registers for the pedigrees of thoroughbred animals, how in 1864 it had been decided to issue a herd book for Shorthorn cattle, how in 1868, after four years' work this was accomplished, and the first volume of the Canadian Shorthorn record published, and how in succeeding years two or three volumes had been slowly added, but at no time does the council appear to have looked upon this as a very important part of its work, or recognised how it ought to have been extended. True in 1876 there had been opened a register for Berkshire swine, and in some other departments a few private individuals and associations had kept track of the pedigrees of a considerable number of animals, but it was left for Mr. Wade to see that if careful breeding in this country were to become general, and the stock to be permanently set on a firm basis, some efficient and uniform system of registration must be adopted, by which all pure-bred animals could be recorded in some form which should be easy of access, and that the Agriculture and Arts Association was the body that was best fitted from its representative nature to take charge of this work. In carrying out this idea the secretary has received the steady and hearty support of the council throughout, and for the past fifteen years the supervision and registration of pure-bred stock, and its encouragement by this means and the holding of stock shows has been the chief work of the Association. Other lines of work, the judging of farms for prizes which we have already mentioned, the collection and publication of useful essays on agricultural subjects, the holding of popular examinations in agriculture, all the various projects which we shall see as we proceed, have been taken up and carried on from time to time, and no one who studies the proceedings of the Association since 1880 can say that its usefulness was confined to the period of the Provincial Exhibition. But these other lines of work it has developed as it did that, until most of them can, as it did, go on upon a footing of their own. There are few of these departments which have not now grown to such magnitude as to have individual associations of their own, and these are now to take over the work and carry it on under the supervision of the Government, and the work of the Agriculture and Arts Association being thus completed, it peacefully makes way for its successors.

The changes in the membership of the council for 1881 consisted in the election of Henry Parker, of Woodstock, and Joseph Hunter, of Eden Grove, in the places of Hon. D. Christie, deceased, and William Roy. Mr. J. B. Aylesworth was chosen president for the year. The resignation of Mr. Craig, as secretary, having been received, Mr. Henry Wade, of Port Hope, was chosen in his place.

In addition to judging and awarding prizes to the second series of farms, in the six counties in the extreme southwest of the Province, the council this year revived a class of work by which a great deal of good had been done in the early days of the Association, but which had for some years been neglected, by offering prizes for two essays to be printed in the report for the year. The subjects chosen were "Forestry" and "The best methods of restoring the fertility of partially worn out lands."

It was further decided to establish a course of reading and study for farmers' sons who were unable to attend the lectures at the Ontario College of Agriculture, and

President Mills of the College was asked to arrange a curriculum. The plan which the council secured from him embraced a training in the rudiments of the sciences which bore directly on the practice of agriculture, and a graded system of examinations to test the efficiency of the work done. A number of suitable text-books were also recommended. The council decided on motion of Mr. Drury to hold these examinations annually and grant certificates, in addition to offering several scholarships.

The exhibition at London was kept open for nine days only, the period of two full weeks, tried at Hamilton, having been found too long and rather inconvenient. In the revision of the prize list some new classes had been introduced, including Polled Angus cattle, for which prizes had not of late years been offered. During the course of the fair, meetings were held almost every evening, at which papers were read and general discussion indulged in by those present.

When the Board of Agriculture had decided to issue the first Shorthorn herd book, which as we have seen was published in 1868, in accordance with what seemed most suitable and most generally desirable at the time, the English standard of pedigree had been adopted, which demanded only four crosses of pure-bred male stock. This rule had been followed in the second, third and fourth volumes also, which had been issued in the meantime. A desire appeared now to be growing among Ontario breeders that the standard should be raised, and accordingly the council called a meeting of Shorthorn breeders for one of the days of the fair. This gathering was largely attended, and the sentiment appeared almost unanimous in favor of a higher standard. The Association was quite willing to comply with their wishes in this matter, but as a section of the breeders who were in favor of recording only animals which could be traced wholly to registered imported stock, professing to believe that the Agriculture and Arts Association's records could never be made high enough to suit them, forming themselves into the British American Shorthorn Breeders' Association, resolved to issue a herd book of their own, the council at a subsequent meeting in Toronto, decided to retain in its records such animals with seven pure sire-crosses as had already been registered, but to receive no more new ones unless they complied with the highest standard. This arrangement was kept up until 1886, during which period the council issued one volume each year and the British American Association three volumes in all. In the year 1886 an amalgamation was effected.

At a meeting of the council held in November a special committee appointed to consider what improvements could be made in the manner of conducting the Association, and lessening the expenses of its management, presented a draft for a new Agricultural Act. This was approved after some discussion, and its recommendations made law by the legislature early in 1882.

At the general meeting held at London during the exhibition, it had been decided that the next fair should be held in Toronto. The council was now informed that on a consultation between the city authorities and the directors of the Industrial Exhibition, it had been decided by these bodies that they could not make way for the Provincial.

The Association could without doubt have enforced its right to have the use of the buildings and grounds, which had been furnished primarily for its use. On the old grounds, used prior to 1878, it will be remembered that the Association had a distinct claim, by virtue of a section in the terms of the government grant of the site to the city. When the city desired to change the location in 1878, the Agricultural Council was asked to relinquish its claims upon the old grounds, and after some negotiation did so on the express stipulation that it was to have the same rights on the new grounds, and this was provided in the lease of the Garrison Commons for this purpose to the city. On this understanding the council had also granted $4,000 towards the construction of the new buildings in 1878, and yet with all these claims, and with the undoubted legal right to enforce them, it found itself supplanted by a semi-private organization, which was supported in its action apparently by the citizens of Toronto, who were more directly and personally interested in its success than in having an exhibition such as was the Provincial Fair.

A committee of the council appointed to consider the case, reported that "While desirous of maintaining the rights of the Association, your committee feel that no good can be obtained by entering into litigation with a body of men who will pander to local interests, to the detriment of the general public. They believe that the agriculturists of this Province will endorse the action of this council in its determination to take the exhibition to some other city where ample accommodatian can be offered, and where a large amount of good may be done by holding such exhibition."

This report was adopted and the determination as to where the fair should be held, left over until the spring meeting.

The elections for the year 1882 resulted in no change in the membership of the Council. The first meeting was held in March, and Mr. Drury elected President.

During the interval since the last meeting the Legislature had met and embodied the recommendations of the last year's Council into the Agriculture and Arts Act of 1882. Some of the changes were of great importance and we may consider them at some length.

Of late years we have said little about the *ex officio* members of the Council. When the Board of Agriculture was formed in 1850 besides the regularly elected members it will be remembered that three persons should have seats in it *ex officio*, viz.: the head for the time being of the Agricultural Department in the Government, the Professor of Agriculture in the University of Toronto, and the President in each year of the Agricultural Association. Upon the amalgamation with the Board of Arts and Manufactures in 1857 two more members *ex officio* had been added from that body, together with the Superintendent of Education for the Province, making altogether six such members.

By the Act of 1868 the number had been further increased, and provision made for the addition of delegates from new societies, so that at the time at which we have now arrived the Council of the Association embraced besides thirteen elected members, an unwieldly additional executive of fourteen, consisting of the Commissioner of Agriculture for Ontario, the President, Vice-President and one other representative from the Mechanics' Institutes Association of Ontario, the respective Presidents of the Fruit Growers' Association, the Entomological Society, the Eastern and Western Dairymen's Associations, and the Ontario Society of Artists, the Professors of Agriculture in the University of Toronto, Albert College, Belleville, and the Ontario School of Agriculture at Guelph, the Principal of the Guelph School and the Minister of Education for Ontario.

As a general rule little part had been taken by these members in the deliberations of the Council, especially of late years since they had grown so numerous. Accordingly we have thought that in this record it would be quite unnecessary to give each year the whole list of *ex officio* members. The aim in adding them to the Council has been to ensure a proper amount of attention at the fairs being given to the different departments and industries which they represented. In fact, up to 1868, when the Board of Agriculture had possessed a distinct line of duties outside of the management of the fairs, it was only at the meetings specially devoted to exhibition business that the *ex officio* members shared its deliberations. Since the regular membership of the Council had been increased in 1868 there had been no practical need at all of any other members, nor any work for them to do. This was felt in the Council itself, especially in view of some criticisms on the unnecessarily large expense which the meeting of such an unwieldly body involved, and it was on the Council's own recommendation that it was now enacted that in future the Commissioner of Agriculture should be the only *ex officio* member. By this change the Association lost the services of one old and valued counsellor. When the Board of Agriculture had been first constituted in 1850 George Buckland had been its first secretary. A year later he had obtained a seat on it, by virtue of his appointment as Professor of Agriculture in the University of Toronto. When he resigned the secretaryship in 1858 his active duties in connection with the Board had by no means ceased, but as an *ex officio* member he had sat on it throughout, assisting its deliberations with the results of his matured judgment and wide acquaintance with agricultural affairs. The vacancy thus left was felt by the Council for some years.

Another important statutory change had been suggested by the trouble with the Toronto people about the fair grounds. In view of the possibility that a similar condition of things might recur in any year and in any other city, thus putting the Association in a position of extreme embarrassment, it was enacted that in future it should not be compulsory for the Association to hold an exhibition in every year, but if any year the Council deemed a fair inadvisable, it might take up such other work as it might think best suited to advance the interests of agriculture.

For many years the Council had received an annual grant from the Government for the purposes of its work, the annual exhibition in chief. By the new Act it had to submit each year, before receiving a grant, an estimate of the amount required by it, showing in some detail how it was proposed to expend the sum. This was rendered necessary by the possibility that in some years the exhibition might not be held, in which case the Government would not be willing to make its grant so large.

The Council now had its hands free and could have let the year pass without a fair of any kind as Toronto had refused it, but as both Kingston and Ottawa were anxious to have it, and the Association still owed a debt to the eastern counties, it was decided to go to Kingston.

The most successful feature of this exhibition was the dairy show, in extending the prize list and attending to the management of which the Eastern Dairymen's Association had joined Otherwise the display was much as usual, a good proportion of the best animals from all parts of the Province being present.

Mr. Drury, in his address to the members of the Association, called attention to the changes which we have above mentioned, affecting the Agriculture and Arts Association. One other change by which the Government took up a line of work the necessity of which the Association had often advocated, he also dwelt upon. By the same Act which we have before quoted there was established in connection with the Department of Agriculture the Ontario Bureau of Industries Since the county societies had ceased to send in yearly the valuable reports with which they used to supply the Board up to 1868, the only agricultural statistics collected were those obtained every ten years by the census commissioners, and these were valueless for purposes of comparison, as a tenth year might be particularly favorable or quite the reverse from an agricultural standpoint. To guide farmers in forming an estimate of what the production of the year was likely to be, and so determining when and where they might market their produce to the best advantage, it was felt that some regular system of collecting statistics from year to year should be set on foot, and for this work the Bureau of Industries was established. Offices were secured from the Council in its building on Yonge and Queen streets.

The prize essays this year were on the subjects "The Homestead" and "Manures."

The sixth volume of the Herd Book was issued during the year and the seventh begun. The collection and preparation of material for the first volumes of the Galloway and Ayrshire books was also got well under way. A record for Suffolk swine was further opened this year on the same principles as Berkshires had been registered ever since 1876.

The elections for 1883 resulted in only one change, Mr. John C. Snell of Edmonton succeeding George Graham as the representative of District No. 6. Mr. Graham, however, still continued for many years to act as treasurer to the council. Mr. D. P. McKinnon was chosen president for the year.

During the course of the previous year the secretary had been commissioned by the council to visit the Fat Stock Show which was held annually with such success at Chicago. He reported most favorably on what he had seen, and the usefulness of such institutions, and earnestly advised the establishment of a similar show in Ontario. This proposal was endorsed by the Herd Book Committee, and it was accordingly resolved by the council to hold a Fat Stock Show at Toronto in the fall of 1883, in conjunction with the Agricultural Society of the County of York, which had promised its co-operation, and the city of Toronto, which also promised some assistance in the way of accommodation. This move was of special importance in view of the approaching abandonment of the

Provincial Exhibition, for the great local fairs which took its place, being as we have said, to a large extent financial speculations, had too many diverse interests to please to give a sufficient amount of encouragement to an interest which attracted the attention of few besides earnest agriculturists. The first Fat Stock Show held in Toronto in December of this year was a great success in so far as the quality of the display was concerned, but was scarcely so encouraging from a financial standpoint, chiefly owing to the fact that suitable buildings for the accommodation of spectators were not provided by the city. The prizes awarded came to something over $1,000.

The exhibition this year was held at Guelph, and owing to its location in the centre of about the best agricultural and stock raising district in the Province the display, especially of animals, was particularly fine. The horses exhibited were collectively the best yet seen in Canada, and the sheep also were said to excel any previously shown. The cattle as well were quite up to the highest mark yet reached, and in this department a larger amount was awarded in prizes than ever before. If the attendance was not quite as great as in the larger cities, the fair at least was visited by most of the farmers within reach, and no one present can have doubted that for no worthier purpose could a Government grant be given in an agricultural Province, than to secure, as often as possible, such a display for the education of the farming classes.

Some correspondence was carried on this year between the council and the Commissioner of Agriculture with regard to the establishment of creameries in the Province, the council having been requested to collect information and to report upon the matter. A gratifying result was the passing by the Legislature at the next session of a measure providing for the founding of several creameries in various parts of the Province at which public instruction was to be given in scientific butter making.

In view of the rapid destruction of the forests in the Province the council decided to memoralize the Government to pass an Act for the encouragement of the planting of trees by municipalities and private individuals.

In the department of stock registration good work was done this year. In all 2,839 animals were recorded, 2,630 cattle, 160 swine and 49 horses. Of the 2,630 cattle 2,100 were Shorthorns, and these were mostly included in another volume of the herd book which was issued this year. The first volume of the Galloway herd book was also published and the printing of the Ayrshire book got well under way. The committee reported that some of the Berkshire swine men were anxious for a book, there being already over 500 entries in this department. The work was however only beginning. In five years the Association had almost as many entries, outside of the Shorthorns, as it had now altogether.

Several good essays were published in 1883. The subjects, matters of general interest as usual, were "The increasing tendency of farmers' sons to leave the occupations of their fathers for other pursuits," and "The best and most practical means of improving the quality of butter in Ontario."

In the following year there was again only one new member chosen. In District No. 10, Hugh Reid, Esq., of Annan, was elected in place of Mr. Joseph Hunter. At the meeting held in March Mr. Joshua Legge was chosen President.

The Exhibition was held in Ottawa, and though the Western Fair, which was held at London at the same time, kept away some of the exhibitors from that part of the Province, the show was still a great success, so markedly so in fact that at the annual meeting of delegates held during its progress, the feeling in favor of the Association continuing to hold its fairs each year, was found to be practically unanimous. With the resources at its disposal the Association was able to offer much greater prizes for agricultural products than the other fairs chose to apportion for this purpose, and especially to give every part of the Province an opportunity of competing for these at intervals of three or four years. The Association made it its constant endeavor, by avoiding all questionable expedients for money making at its fairs, and yet by giving a show first class in every respect, to prevent the agricultural classes from cultivating that morbid taste for excitement and spectacular display which so largely prevailed in the cities, and to

which the city fairs had to pander. With these motives the intelligent farmers who were delegated to the fair from the various counties heartily agreed, and all united in deciding that as long as the Provincial Fair could be carried on without any very great annual financial loss, it was well worth maintaining, or at least until they should have made possible great annual exhibitions in all the cities as had already been done in several places. Then at length if it was felt that the holding of a Provincial Fair every fourth year was incompatible with the success of these, it might give way, but not until then should this be thought of.

This year we have another collection of valuable essays published, the subjects being "The Methods of meeting and destroying the Canada Thistle and Quack Grass," and "The Profit of Breeding, Feeding and Fattening Beef Cattle for the Market." The awarding of prizes for the best managed farms was still continued, and as usual we have a complete description by the judges of the farms entered for competition, and the method of cultivation employed thereon.

In October the Council received a requisition from the Department of Agriculture at Ottawa to supervise the collection of a suitable display of Canadian agricultural products for the International Exposition to be held at Amsterdam in May of the following year. A committee was appointed to take charge of the work and succeeded in making a most creditable selection. These exhibits sent to the great World's Exhibitions held from time to time, served in a great measure to dissipate many of the misapprehensions which existed in older countries as to the resources and climate of Canada, and even in some quarters we must regret to say as to the state of civilization to which it had advanced. They not only attracted the attention of those who actually visited these exhibitions, but what was of much more general advantage, excited favorable newspaper reports and comments, and the information thus spread abroad was much the most effective advertisement which the country could have secured.

The work done in stock registration was about the same as in 1883. There was some falling off in the number of Shorthorns registered, owing to the competition of the Dominion Shorthorn Association Book, but in most of the other classes there was a considerable increase. In September the first volume of the Ayrshire record was issued after several years of preparation. The committee reported that the swine and Clydesdale registrations were gradually piling up a mass of material from which books might soon be expected, and quite a number of Shire horses were recorded during the year. The eighth volume of the Shorthorn series was duly published, and a reduction in price was recommended, which was adopted by the council in the following year.

The elections for 1885, held in Districts 1, 2, 3 and 4, resulted in the re-election of all the retiring representatives. Mr. George Moore, of Waterloo, was chosen President.

A good deal of discussion took place at the first meeting as to whether it would be wise to hold the Fat Stock Show again at Guelph, as the last one there had been so successful, and possibly locate it permanently there, or adopt the same system as with the exhibitions, and move it about from year to year. The favorable position of Guelph, and the strength of the stock raising interests in its vicinity, seemed to afford a good guarantee of success should the fair be retained there, and a strong pressure was exerted by the Fat Stock Club of that place to secure this. As however the county of Oxford, which also possesses a flourishing organization of this kind, offered the same accomodations and subscriptions as did Guelph, it was finally resolved to hold the Show this year at Woodstock.

Early in 1885 Professor George Buckland died. Appointed secretary of the Association in 1848, two years after its formation, he had energetically and conscientiously fulfilled the duties of that office for ten years, until, as will be remembered, he resigned on account of his other duties, and his increasing work in the University. From that date, as an *ex-officio* member, he had continued to sit on the Board, aiding its deliberations with the result of his long experience in the work, and the breadth of his views and sympathies, admired and respected throughout by all, until the year 1882, when, as we have seen, the *ex-officio* members were eliminated from the Council. Of later years he had held the post of Assistant Commissioner of Agriculture. His most signal service,

perhaps, had been the compilation of the first volumes of the Association's history, in 1856 and 1857, from a mass of disorganized data, which, had it been allowed to accumulate much longer, no one could have hoped to disentangle.

At a meeting held in July the council received the welcome news that the fair of 1885 was again to be given a Dominion character, and with this view the central government had voted an appropriation of $10,000. To this grant certain conditions were attached, among them being one that part, and in some cases all of the freight charges on exhibits from distant parts of Canada should be defrayed by the Association from the additional resources which it thus had at its disposal. The grant was accepted with the conditions attached, and thus not only was the display made general, but a considerable increase in the prize list, and much better accommodation on the grounds at London were made possible. The result was that in both the amount offered in premiums, and in the number of entries, this fair surpassed any previously held. The exhibits from the distant provinces also combined to make it more than usually interesting, for no Dominion exhibition had before this been held west of Ottawa

This year we have essays published on "Underdraining" and "The Apple." On both subjects two carefully prepared papers were awarded prizes and places in the report.

The Fat Stock Show was held at Woodstock in December, and the display was considered very satisfactory, though in most departments it was not quite up to the mark of that of the previous winter at Guelph Some classes, however, showed improvement, particularly the sheep.

We have already shown how the British American Shorthorn Breeders' Association came to be founded in 1881, and how in consequence of its formation the Agriculture and Arts Association revoked the determination which it had come to earlier in the year to record pure stock only, and had retained animals complying with the seven cross standard. Accordingly in the intervening period both associations had been issuing herd books. The older body had published one volume each year, and three volumes in all had been issued by the new Association A good deal of confusion had been a necessary consequence, and those breeders who wished to give their animals a sure and undisputed standing had been put to the trouble and expense of registering in both records.

Both parties had come to feel that no good was being done by this rivalry, and it began to look as if a settlement might now be possible. It had been felt in the past by the council that it was necessary to recognize those animals whose domestic ancestry was far enough removed by judicious crossing for all practical purposes, otherwise the herd books would have benefited a few importers only. Stock breeding had now advanced so far and become so general that the council, which acted of course in the interest of the farmers at large in the Province, and not of the breeders, had come to feel that the interests of these two were now identical, and that in future there was no need for recording any animals which could not trace their descent on both sides to pure imported stock. The Breeders' Association, on the other hand, now saw that their policy of isolation was productive of no good, besides involving a great additional yearly expense.

So in this year both Associations appointed delegates to confer with regard to the adoption in future of a uniform standard of registration for shorthorn cattle, and the publication of one series of herd books only. This joint committee met in Toronto in October.

Without much discussion it was decided that in future there should be only one herd book for recording Shorthorns, and that all animals registered must trace descent directly through both sire and dam to recorded imported cattle from Great Britain. It was further resolved that the three volumes already issued by the Breeders' Association should be numbered as volumes ten, eleven and twelve in the series, nine volumes having already been issued by the Agriculture and Arts Association. Volume thirteen, it was decided, should be published jointly by a committee of twenty-one members, fifteen from the breeders and six from the council. In this way harmony would prevail and a careful attention to all the interests concerned be ensured. At a subsequent meeting Mr. Henry Wade was appointed editor of the amalgamated herd book.

When the council met on the 11th of March, 1886, there was only one change in the membership for the ensuing year, Mr. Robert Vance, of Ida, having been elected in the place of John Carnegie, M.P.P. Mr. Henry Parker was chosen President.

In the secretary's report for 1885, which was presented at this meeting, there was given a summary of the work done in the way of stock registration since his appointment to the office. From this it appeared that in the four years, 1882, 1883, 1884 and 1885, over 10,600 animals had been recorded by the Association. Shorthorns, of course, formed a majority of the whole number, but in the last year or two they had by no means had the field to themselves as at first. The amount paid out in prizes at the last Provincial exhibition was also analyzed, showing the proportions which the different departments had each received. For live stock alone nearly $11,000 had been distributed in premiums, made up as follows :

For horses, $3,303 ; for cattle, $5,122 ; for sheep, $1,549 ; for swine, $1,271. The secretary further presented a review of the fat stock show, at Chicago, which he had attended on behalf of the Association, and gave a list of some of the successful Canadian prize winners.

A serious grievance in the country at this time and one the proportions of which were constantly growing, was caused by the presence in the Canadian market of large quantities of oleomargarine and other similar productions from animal or vegetable oils, which were sold to an unsuspecting public under the name or semblance of butter. The greater part came from Chicago or other American manufacturing centres greatly to the prejudice of the farmers of the Province. In the interest both of producers and consumers it was felt that something ought to be done, and the council in its representative capacity decided to memorialize the Dominion Government to pass a stringent measure enacting that such articles must be sold, if at all, under their own proper names, so that there should be no possibility of confusing them with the products of the dairy, and also that a high protective duty should be placed both on their importation and manufacture. The council also petitioned the Dominion House in favor of a Bill "To amend the Animals' Contagious Diseases Act," then about to be laid before that body by Mr. Mulock of North York.

According to a resolution of the council a meeting of Clydesdale breeders was called in the course of the summer, and an association was formed to further their interests similar to those which now existed in several of the other Departments of Stock. A great number of registrations had now been collected, and before the summer was over the first volume of the Clydesdale stud book had been published, thus giving a firm standing to pure-bred animals of this class in Ontario.

The exhibition was opened, at Guelph, on September 22nd, by Hon. A. M. Ross, the Commissioner of Agriculture for Ontario. Though, as might be expected, the display was not nearly so large or varied as had been collected at the fair at London the year before, which had been assisted by the Dominion Government, still the agricultural part of the exhibits was as good as usual, and from a farmer's standpoint the fair could not be regarded as other than a complete success As Guelph was a small city, the general gate receipts were somewhat below the average. The practical certainty of this was a great obstacle in the way of holding the exhibition elsewhere than in one of the centres of population, and this year the deficit was particularly discouraging in view of the agitation which interested parties were keeping up for the abandonment of the Provincial. The effect of this was very manifest in the trouble which developed in the following year with regard to the site. As the western part of the Province was now fairly well provided with permanent fairs, all more or less satisfactorily established, it was seen that such work as the Association had still to perform along this line, would be in the eastern counties, and as a request had been received from Ottawa it was chosen as the site. The expectations of a fair there attended with the success which had always followed the Ottawa exhibitions were partially disappointed as we shall see, and this led to the speedy abandonment of the Provincial exhibition.

The December stock show was this year also held in Guelph. Its complete success and the increasing interest which it excited among breeders gave evidence that however

near its end the annual exhibition might be, the fat stock shows had taken a firm hold and would for many years have a great and useful work to perform.

The annual report of the Association for this year contained the papers of Mr. Thomas Shaw, of Riverside, and Mr. John Campbell, of Woodville, to which were awarded the prizes which the Association offered for the best essays upon "The relations between employers and employed in Canada, with special reference to the farm, with a view to improving these relations." There were also published a collection of papers on grasses and clovers, defining their comparative values, the best methods of cultivation, and their adaptability to different soils.

In the year previous farm prizes had been awarded in the last of the six districts into which the Province had been divided for this purpose in 1880, and the whole of the Province had now been covered. To further excite interest among enterprising farmers it was resolved early in 1886 to offer three valuable sweepstake prizes for competition among those who had been awarded medals in different parts during the six years previous. The man who thus obtained the honor was Mr. Simpson Rennie, of Scarboro'. The award carried additional honor, and was calculated to afford more encouragement to ordinary small farmers from the fact that Mr. Rennie's farm itself was a small one, containing something over a hundred acres. This he had developed and managed to such perfection that the judges had to confess that it was entirely beyond their criticism. As a specimen of the value of careful and intelligent cultivation it was remarked of Mr. Rennie that while each year he fed on his farm as much as he grew, thus keeping up the fertility of the soil, yet this fodder was all purchased. His own crops were sold at double or treble the price which he paid, as seed, for which purpose they were eagerly sought by his neighbors. The second prize went to Mr. William Donaldson, of South Zorra, and the third to Mr. John Fothergill, of Burlington.

These competitions had up to this time been very popular and no hesitancy was felt about continuing them. As to their value from an agricultural standpoint in the history of this Province there can be no manner of question. In almost every neighborhood they proved an incentive to some farmer even if he were not successful in winning an award. These men took a pardonable and justifiable pride in making their farms excel those of their neighbors, and thus excited a healthy emulation among many who had not previously had any ambition in this respect, and had not entered the competitions. The consequences were seen in an improved general excellence observed by the judges in the following years when the various districts were again covered.

In 1887 two new members were elected, Mr. William Dawson being chosen for District No. 9, and Mr. James Rowand for District No. 10, in the places of Henry Parker, deceased, and Hugh Reid, respectively. Early in the year there died also another member, Mr. Stephen White, and he was succeeded by Mr. Albin Rawlings, of Forest. The president chosen for this year was Mr. J. C. Snell.

A deputation from the Veterinary College waited upon the council at its first meeting. It consisted of Prof. Smith, the principal, and several prominent graduates practising in different parts of the Province. They came to request the council to recommend to the Government that a measure of protection should be given to qualified veterinary practitioners similar to that afforded to the medical and other professions. Their views were urged with ability and vigor, and it was shown that skill was as much needed in treating animals as human beings, and permanent danger just as apt to result from bungling operations On the other hand it was urged by some members of the council that there were many localities in the Province where veterinary surgeons were not within easy reach, and in such cases a stringent rule would be a great hardship, and there was no reason why in such circumstances a man who had made a careful personal study of the diseases of animals, and was thought competent by his neighbors, should not be allowed to practice, even if he had not attended a veterinary institution. So finally, on the recommendation of Mr. Drury, it was resolved that the Government should be advised to pass a modified measure of protection, to come into force in each county only on its approval and formal adoption by the county council.

On several occasions since the last exhibition had been held there, the City of Ottawa had professed itself very anxious to have it again, and at the meeting in the fall of 1887, on the guarantee of the city council that the grounds and buildings would be put into proper shape, it had been decided to hold the next fair in that city. Accordingly the surprise of the members of the Agriculture and Arts Council was very great indeed when they were called to a special meeting in Toronto in May, to learn that the new city executive had disclaimed the obligation imposed upon it by its predecessors in office, and to determine upon what was to be done under the circumstances. The reason advanced by the Ottawa authorities was the lack of funds on the part of the city for such an undertaking. Nothing could exceed the disappointment of the eastern members of the Association who had been responsible for urging the claims of Ottawa in the council, and for a time it seemed as if the exhibition would be allowed to drop, despite the fact that the Association was bound by statute to hold it. However the Provincial grant had been made with a view of the fair being held at Ottawa, and when Mr. Morgan, on behalf of the citizens and the inhabitants of the surrounding district, gave his personal guarantee that accommodation would be provided, it was decided to go to work with energy and make the fair a success in spite of every discouragement which might beset it. We can scarcely wonder, however, in view of all this trouble and uncertainty, of a season of extreme drouth in most parts of the Province, and of the rivalry of the two great western fairs, of which the one at London was held simultaneously with the Provincial, that the number of entries dropped to about 6,000, and that some falling off was shown in the quality of even the exhibits which were successful in receiving awards. As regards the interest taken in the surrounding country, and the exhibits gathered from the vicinity, the show was a most decided and complete success.

Mr. Snell, the president, in his address, called attention to the way in which the local exhibitions were supplanting the Provincial, and stated emphatically on behalf of the council that so soon as the people of Ontario made it evident that they wished no agricultural exhibitions, but desired to see the management of their fairs handed over to the cities and towns, or to private joint stock companies, the council would at once acceed to their desires and abandon the Provincial.

We have already had occasion to mention on one or two instances the Western Fair which had been permanently established at London. Unlike the Toronto directors the management of this institution had never chosen to dispute the undoubted right of the Agriculture and Arts Association to the use of the grounds every fourth year for the purposes of the Provincial Fair, by virtue of the money which it had advanced to erect the buildings In fact upon the London grounds, as we have seen, the Association had taken the precaution to take a lien. In this year, 1887, the directors of the London Exhibition were changing the site of the fair grounds, having secured a larger and more suitable site. After some negotiations with the Agricultural Council it was decided that the latter body should retain its rights to hold a fair on the new grounds every fourth year, beginning with 1889, in which year the Association was to advance to the local directors the sum of $1,000 in consideration of the more substantial and commodious buildings which they were erecting. As the Association used the grounds for one year only, the Western Fair was the gainer to the extent of about $5,000, including the amount of the lien, in the same way as were the local fairs in Toronto, Kingston and other places where the Association had advanced larger or smaller sums from time to time for permanent improvements.

In this year prizes were again awarded for farms in the first of the six districts established for the purpose, those who had won gold medals in the previous competition being excluded from competing.

The Council had been anxious to hold the Fat Stock Show again in Toronto, and this winter it was enabled to do so by the very liberal offer of W. D. Grand. Esq, the extensive horse dealer, to place his large and convenient stables at the disposal of the Association for this purpose. Unfortunately, as four years before when the first show of the kind conducted by the Association had been held in Toronto, the amount of general

interest taken was discouragingly small, both the subscriptions and admissions being much fewer than in Guelph or Woodstock. The city authorities too could be prevailed upon to do nothing; the same spirit was manifested as had been before in connection with the Provincial Exhibition.

It was decided to hold the next fair in Kingston, and in order to increase the local interest it was agreed that it should be conducted in conjunction with the Kingston Agricultural Society, which should take ten per cent. of the receipts.

The work of registration was considerably extended during the year, some 1,300 animals being recorded, exclusive of the Shorthorns which were now partly under the control of the Breeders' Association, and which would about double the number. Two Aryshire breeders' associations, which had been working in rivalry for some time were amalgamated, and their records placed in the hands of the Agriculture and Arts Association. The Council had also formed a Canadian Draught Horse Association, and two or three other departments were about resuming proportions large enough to justify it in joining those interested into similar organizations.

In the report were published also two careful essays on the potato, its propagation, cultivation and insect enemies, together with the usual report from the prize farm judges.

For the year 1888 the members of the Council were as follows, numbered according to their respective districts.—No. 1. D. M. McPherson; No. 2. Ira Morgan; No. 3. Joshua Legge; No. 4. P. R. Palmer; No. 5. Robert Vance; No. 6. J. C. Snell; No. 7. George Moore; No. 8. J. C. Rykert, M.P.; No. 9. William Dawson; No. 10. James Rowand, M.P.; No. 11. L. E. Shipley; No. 12. Albin Rawlings; No. 13. Charles Drury, M.P.P.; Mr. Morgan was elected president. This was the second time that he had held the office, his previous term being in 1876, twelve years before.

The exhibition at Kingston was opened by Sir John A. McDonald and Baron Stanley of Preston, the Governor-General. The display was as good as usual. There were about 400 fewer entries than there had been when the fair was last held Kingston in 1882, but there was no appreciable falling off in quality and the agricultural exhibits in particular were very good. The fair was well attended and the disparity between the receipts and expenditure was in no way startling as it had been at Ottawa in the previous year.

There was a general feeling that this was likely to be the last year in which the Association would have a grant for exhibition purposes. Those interested in the fair and in the welfare of agriculture felt that this should not be decided without a vigorous protest. In the annual address Mr. Morgan referred earnestly to the good that the exhibition had done and was still doing and predicted that if the farmers allowed to drop the one really agricultural exhibition which they still possessed, they would before long regret it. And at their annual meeting the delegates present at the fair appointed a committee to wait upon the Ontario Government praying for the continuance of the grant. A petition to the same effect was also presented, signed by all the leading exhibitors, including almost every breeder of prominence in the Province.

The essays published in this year's report deal with the subjects "Hindrances to progress in Canadian agriculture with a view to their removal" and "field roots, their comparative value as cattle food and the best method of cultivation." The first mentioned subject is necessarily rather too wide to be treated in anything like an adequate manner in one paper, but the two essays which we have published are full of valuable and interesting information and suggestions worthy the careful perusal of every farmer with any ambition or enterprise. The paper of Mr. Shaw of Hamilton, which took the first prize, takes up and analyses four classes of hindrances which he defines as lack of education, lack of diligence, lack of receptivity and lack of spirit as shown in submitting to legislative and social restrictions and exactions which any other class would violently resent.

It will be remembered that the Association was under engagement to hold the Provincial exhibition for 1889 in the City of London by virtue of the arrangement which it

had made with the directors of the Western Fair when it it gave up its lien upon the former grounds of the latter body. This engagement the Council resolved at a meeting in December to keep and to represent as strongly as possible to the Government the position in which it stood, and the advisibility of making the usual grant in view of this.

The registrations received in 1888 totalled over 1,200 in number, and the receipts from this source were above $2,000. This part of the work of the Association was now advancing at a rate which showed that its growth had only begun and that in the next few years enexampled strides might be expected. The number of animals now recorded by the Association directly was about as great as it had been before 1886 when the Shorthorn registrations, which up to that time had been the principal item, had passed partially out of its hands, to be managed by the breeders themselves. During this year the Association issued the third volume of the Clydesdale stud book and got ready all the material for an immediate issue of the fourth.

The Association still continued to hold its annual agricultural examinations for the benefit of those who were unable to attend the Agricultural College at Guelph, but were willing to read and improve themselves at home. Certificates were granted to the successful, and several scholarships offered each year as an incentive. The progress made was not very encouraging but still a few presented themselves for each examination and interest seemed to be slightly increasing.

No fat stock show was held this year. It was first postponed and then abandoned, as there had been a very dry summer and little stock was being fattened during the winter.

We have now come to the last year of the Provincial Fair. From the nature of this exhibition and the large amount of the prizes offered for agricultural products, the annual receipts from gates and entry fees nearly always fell far below the expenses necessary to carry on the show and pay the premiums. In no cases perhaps had the two items ever been approximately equal excepting years before in Toronto and London, prior to the establishment of local fairs in these cities. This being the case the exhibition had been forced to depend for its continued existance as an agricultural fair upon the yearly grant made by the Legislature.

The Council itself was somewhat strengthened in 1889 by the election in District No. 7 of a man who has ever since taken a most prominent part in its deliberations and been one of its most efficient members. On account of his prominence and influence in the legislature particularly, has Mr. Awrey been able in a special degree to do valuable work for the Association.

In its efforts to be held its exhibition this year the Association was by no means entirely without support. During the first meeting of the Council held in February an influential deputation representing the stock breeders of the Province appeared before the Minister of Agriculture to urge its continuance. The members of the deputation were Messrs. William McCrae of Guelph and Robert Vallance of Osnabruck. Both of these men with great force and clearness urged the claims of the farmers of the Province to have an exhibition of their own.

In the Council Mr. Rykert, after being elected to the presidental chair for the third time during the course of his connection with it, made a strong speech in favor of continuing the exhibition and was energetically backed by the other members who were mostly of the same mind and who were united in resolving to hold the fair this year at any rate.

The outcome of the matter was that the grant was renewed for 1889, but at the close of the year Mr. Drury had to assure the Council that the Government could not advise the further maintenance of the Provincial Exhibition, and that in future the grant for this purpose could not be made.

The last Provincial Exhibition, the forty-fourth, held in London in September, 1889 afforded in itself no reason, by way of any inferiority or lack of interest, why it should not again be held. In almost every respect it was superior to that held at Kingston in

1888, and it was quite up to the average of the best shows held in recent years. We subjoin a table showing the places in which each of the forty-four exhibitions conducted by the Association had been held, the number of entries at each, and the amounts offered and actually distributed in prizes.

Comparative Table, showing the progress of the Provincial Exhibition since its commencement in 1845.

Year.	Place of Exhibition.	Total amount offered in prizes.	Total number of entries.	Total amount awarded.
		$ c.		$ c.
1846	Toronto	1,600 00	1,150	1,100 00
1847	Hamilton	3,000 00	1,600	2,400 00
1848	Cobourg	3,100 00	1,500	2,300 00
1849	Kingston	5,600 00	1,429	2,800 00
1850	Niagara	6,106 00	1,638	3,400 00
1851	Brockville	5,017 85	1,466	3,223 75
1852	Toronto	5,916 95	4,048	4,913 00
1853	Hamilton	6,410 15	2,820	5,293 25
1854	London	7,176 10	2,933	5,427 50
1855	Cobourg	9,216 30	3,077	6,941 70
1856	Kingston	9,238 00	3,791	6,799 50
1857	Brantford	10,071 40	4,337	8,136 00
1858	Toronto	10,700 59	5,572	9,215 00
1859	Kingston	10,513 00	4,830	8,067 50
1860	Hamilton	15,015 50	7,532	12,900 00
1861	London	12,031 00	6,242	10,188 00
1862	Toronto	12,236 00	6,319	10,722 00
1863	Kingston	11,866 00	4,756	9,166 00
1864	Hamilton	12,559 50	6,392	10,304 25
1865	London	13,434 00	7,221	11,036 75
1866	Toronto	12,712 00	6,279	10,228 50
1867	Kingston	12,731 00	4,825	9,311 50
1868	Hamilton	13,304 50	6,620	11,120 00
1869	London	13,428 00	7,649	11,459 50
1870	Toronto	14,110 00	6,847	12,441 70
1871	Kingston	15,724 50	6,682	12,951 00
1872	Hamilton	16,092 00	7,714	13,142 00
1873	London	16,016 00	8,420	13,797 00
1874	Toronto	16,640 00	8,162	14,070 00
1875	Ottawa	16,996 50	7,318	14,651 00
1876	Hamilton	18,237 00	10,011	15,631 50
1877	London	16,320 60	10,618	14,387 00
1878	Toronto	17,947 40	10,292	13,980 00
1879	Ottawa	18,525 00	9,668	14,957 50
1880	Hamilton	16,994 00	11,252	13,147 50
1881	London	17,154 50	9,486	13,456 50
1882	Kingston	19,927 00	7,916	14,912 00
1883	Guelph	18,494 50	10,315	14,819 50
1884	Ottawa	20,290 50	7,380	15,281 50
1885	London	23,236 00	11,662	20,235 50
1886	Guelph	17,168 00	9,037	14,478 50
1887	Ottawa	16,529 00	5,967	12,729 50
1888	Kingston	14,603 00	7,504	11,616 50
1889	London	14,703 90	8,095	12,501 90

Perhaps the most prominent thing that strikes one in connection with this table is the number and variety of the fluctuations which we see. In so far as these have not been explained in the foregoing pages it may be remarked that the two chief causes, which affected the amounts offered as well as those actually paid out in prizes, were the varied nature of the seasons and the changes in location, the usual quality of the exhibits and the average attendance in certain cities warranting a much larger prize list than in other less favored districts.

The work in the registration department was still advancing, and this year over 1,850 animals had been recorded. The rapid increase in the number of smaller animals

recorded each year was now making the work as great as it had been before the Shorthorns had passed out of the control of the Association. Some new herd books were this year issued, and a further volume of the Clydesdale Stud Book. Essays were secured and published on "Crop Rotation" and "The Cultivation of Green Crops for Ensilage." The usual space in the report was devoted to the work of the prize farm judges.

This year again the Council did not hold a Fat Stock Show, but it assisted the Guelph Fat Stock Club to hold a show in that city. The old lease of the Association's building on the corner of Queen and Yonge streets in Toronto having expired, Mr. P. Jamieson was given a renewal for ten years at an increased rental.

Though they had continued to hope that the farmers of Ontario would awaken sufficiently to a true sense of their interests to see that the Provincial Fair was maintained, the members of the Council had felt for some years that this hope would likely be in vain, and that the end of its existence was close at hand. They had not, however, had reason to fear, as many people ignorant of the true scope of the work that the Association had been doing of late years had expected, that the whole work of the Association would end with the abandonment of its exhibition. True in past years that had absorbed a good portion of the time of the Council, but its sphere had been extending, and for some years yet there was ample work to engage its attention, even though fewer meetings were required. The most cursory study of the history of the Association during the preceding years will serve to convince anyone how of late the management of an annual exhibition was but one of many schemes which the Council was energetically carrying forward in the interest of agriculture in the Province. It was with fewer misgivings than was generally supposed that it entered upon its forty-fifth year of work in 1890.

The membership was the same as in the year before, with one exception. The new member was Mr. C. M. Simmons, who had been elected to the seat left vacant by Mr. Shipley. The choice for president fell upon Mr. Rawlings.

The officer of the Association whose duties were most lightened by the abolition of the exhibition was the Treasurer. In view of this fact his salary was now reduced to $125 per annum.

This year the plowing matches were again revived, and an appropriation of $600 was divided into four parts, $150 being assigned to each of four competitions which were to be held in four different sections of the Province. The reports which appear show these to have been for the most part very successful and their value by no means unappreciated.

In the Secretary's office over 2,400 animals were this year recorded. The usual number of herd and stud books were published and a special grant of $1,000 was made to the Dominion Shorthorn Breeders' Association to enable it to print back pedigrees. The number of registrations made by this body, in the work of which it will be remembered six delegates from the Agriculture and Arts Association were associated, was this year something over 1,000.

Reports from the various breeders' societies presented by Mr. Wade, show that good progress was being made by all. The Clydesdale Association in particular had developed in a remarkable manner. Its fourth annual Spring Horse Show, held in March of 1890, had been such a pronouced success that it was decided by the Council to take the work more directly into its hands and give it more attention, so that the scope of the next show might be considerably widened, and of more interest to general agriculturists.

The prize farm competition was continued and elicited an unusually large number of entries. The judges were Messrs. John I. Hobson and William Donaldson.

The Council was resolved to make the fairs, which it was still in its power to maintain, fill as far as possible the void in the agricultural world left by the abandonment of the Provincial, and by increasing the scope of these try to follow to as nearly as might be an equal extent of usefulness, that policy of promoting the improvement of the live stock in the Province, through which it had rendered its most signal services to agriculture in the past.

A great deal could not be done in one year, but the Fat Stock Show which had fallen into abeyance during the last two years, in which the maintenance of the Provincial had absorbed the full energies of the Association, was revived, and a most successful show conducted in Guelph in December in conjunction with the Fat Stock club of that city. It was the intention of the Council as fast as possible to increase the prize list for this annual event, and to make it a much more prominent feature in its yearly programme.

Since his appointment as Minister of Agriculture, Hon. Mr. Drury of course sat on the Board *ex-officio*, and during this year Mr. Jonathan Sissons, of Barrie, was appointed to his seat in District No 13. Later in the year Mr. Drury resigned his position in the Government, and was succeeded there, and of course on the Council of the Association, by Hon. John Dryden.

There was one further change in the membership at the beginning of the following year, Mr. Palmer resigning from District No. 4, Mr. James Haggarty, of Huntington, was elected in his place. The president elected for 1891 was Mr. Robert Vance.

Having now marked out the lines on which it was to proceed, the work of the Association during the four years 1891 to 1894 was directed along three or four well defined lines. These were the holding of an annual stallion show at Toronto in March of each year, the holding of a fat stock show at Guelph in December of each year, the formation and partial supervision of various breeders' Associations, the holding of four annual plowing matches and the work of keeping the records of pure-bred stock. All these, as we have seen, had been established before, but during these years they were more or less extended and were conducted in a way which reflected great credit on the Council.

The annual reports issued by the Association contain a record of its proceedings and the work done along each of the lines mentioned above. We have also the list of the awards at the Fat Stock and Horse Shows, together with more or less exhaustive reviews of the proceedings of the different breeders' societies in affiliation with the Association.

These reports are all easy of access, and are likely to remain so. Accordingly, as this sketch has already exceeded by a good deal the limits originally designed for it, we shall content ourselves in these years with only the briefest possible review of the work done, which may serve as a sort of index to the information contained in the reports.

In 1891 prizes were awarded for farms in the extreme east of the Province. The amount of competition was about the same as usual, and quite sufficient to justify the expenditure for this purpose, which this year was about $250.

The annual number of registrations continued on the increase, being this year above 3,000. Through the energy of the Secretary records were continually being opened for new classes, particularly of sheep and swine, the interest in which was rapidly growing. The attention which the Council had given to the formation of an association of the breeders of Hereford cattle in the year 1890 now seemed about to result in a considerable extension of this valuable breed, which had so long remained stationary in Ontario. During the year a second grant of $1,000 was made to the Dominion Shorthorn Association to assist it in printing its pedigrees.

The stallion show held in conjunction with the Clydesdale Association was a great success from every point of view. The development of the Clydesdale Association since its organization in 1886, had been one of the most encouraging results of the policy of the Council in this line. Its shows had been a not inconsiderable feature of its yearly programme; but this year, when the Agriculture and Arts Association took an active part in this event, its scope was much enlarged and prizes were awarded for all classes of pure bred stallions. The Council had the management of the show mostly in its hands, and granted the prizes in all the classes except Clydesdales, and for this class it contributed over $100.

The Fat Stock Show was held at Guelph as usual. In an address which he delivered during its course, Hon. Mr. Dryden took occasion to express his high appreciation of the good that was being done by exhibitions of this kind, and what they still might accomplish in future. At the meeting of the stock show committee of the Council, held to finish up

the business of this show, the members were shocked to hear of the sudden accident which had resulted in the death of Mr. Ira Morgan, one of the oldest members of the Association. Ever since 1873, when he had been first elected to the Council, Mr. Morgan had been one of its most active and useful members, and his loss was severely felt in its deliberations.

At its first meeting in 1892 the Council was notified by Mr. Dryden that he had appointed to the vacancy caused by the death of Mr. Morgan, W. C. Edwards, M.P., of Rockland. One other new member was introduced at this meeting, Mr. W. J. Westington of Plainville, who had been elected in District No. 5, in place of Mr. Vance. Nicholas Awrey, M.P.P., was chosen to preside over the Council during the year.

The year 1892 was the last in which the prize farm competition was continued by the board. The Province had been gone over twice and the members of the Council considered that this work must now be regarded as less pressing than the other important enterprises in which they were engaged and for which their resources were none too adequate. The amount of competition was this year unusually large and four judges had been found necessary, so the expenses mounted up to nearly $400. We have already discussed the importance of this work and the good that it accomplished in raising the general standard of farming. Attention has also been called to the value and usefulness of the reports on their work published each year by the judges, and included in the volume issued annually by the Association. And when it was decided to hold no competition in 1893 the members certainly had no idea that this work was permanently to be abandoned. It was confidently expected that in the future, probably very soon, the Association would be able to take up again this work with more energy than ever. This expectation, however, it was not destined to realize.

The Stallion Show, held in the drill shed in Toronto, was again a pronounced success. In all the classes, 115 stallions were entered, 58 being Clydesdales, the rest chiefly hackney, coach and thoroughbred stallions. The show cost about $1,800 for premiums and expenses, and the receipts were something over $500.

An important step taken this year was the formation of a Hackney Horse Association, which completed the list for horses, the Agriculture and Arts Association having now formed and having in affiliation with it, Clydesdales, shire horse, draught horse and hackney societies. The first volume of the swine breeders' record was published during the year. The registrations numbered over 3,100, the greater part being swine, the largest of the other items being 445 Clydesdale horses and 343 Ayrshire cattle. A third grant of $1,000 was made to the Shorthorn Association.

There was some discussion about taking the Fat Stock Show to Toronto or Hamilton, but it was found that in neither of these places could proper accommodation be assured, so it was again held in Guelph. In managing the show this year the association had the assistance, in addition to the Guelph Fat Stock Club, of the Sheep and Swine Breeders' Associations and thus not only was the display made larger and the prize list increased, but a greater general interest was manifested than ever before. The people of Guelph had excelled themselves in the preparations which they made, and had provided and fitted up a large rink into what is described as "The most spacious and thoroughly adapted show building in the Dominion." In the display of sheep and swine this show had never been approached, and even the cattle were better than had ever before been collected. These facts augured well for the Canadian exhibit at the approaching World's Fair. Everyone present felt thoroughly persuaded of the truth of the observation made by President Awrey in his address, "After the experience of to-day I believe that fat stock shows in the Province of Ontario are here to stay." Mr. Awrey also expressed his conviction that the work of the old Provincial Exhibitions was going on in the horse shows and fat stock shows still conducted by the Association.

Hon. Mr. Dryden expressed pleasure that the Association had followed his advice in giving more money in prizes, and was sure that the fair could be made better still by further advance in this direction. The committee of the Council which had charge of this show, in conjunction with the other societies, consisted of Messrs. Snell, Westington,

Awrey, Simmons, Sissons, Rawlings and Wade. The expenses were over $1,700 and the receipts over $1,000.

The report issued for this year was longer than usual and contained exhaustive accounts of the proceedings of the Clydesdale and Hackney Horse Societies.

At the meeting held in March a committee had been sent by the Council to wait upon Hon. Mr. Dryden, and urge upon him the appointment of a Provincial Commissioner to be put in charge of the work of securing a suitable representation of Ontario's products at the World's Columbian Exposition. Mr. Awrey, the president of the Association, was suggested as a competent person. Shortly afterwards the Government appointed Mr. Awrey for this duty and named an advisory board to assist him, of which Mr. Wade was secretary, and which included two other members of the Council, Messrs. Snell and Rawlings. Preparations were immediately begun to spread information among breeders, fruit growers, and other Canadian producers, the project was vigoriously urged at the meetings of the Council, and before the year was over, preparations for securing the best collection representing the various interests of Ontario ever made, were well under way. The complete success of Mr. Awrey and his assistants in their work is the best tribute to their fitness for the task.

In 1893 the Council had again a new member, Mr. Robert McEwen of Byron, who was elected to the seat for District No. 11, formerly occupied by Mr. Simmons. Mr. Rowand was elected president for the year.

The first business was, as usual, the stallion show. The other horse breeders' societies besides the Clydesdale Association this year gave some assistance, and thus the show was considerably enlarged, about $1,800 being paid in prizes. The total expenses were over $2,200, of which, after the receipts and the grants from the other societies were deducted, the council had to pay about $1,250. The show was evidently increasing in popularity, and the Toronto drill shed was crowded to its utmost capacity with spectators. It was, however, a very unsuitable building, being small and without provision for heating.

The registrations for the year had increased to a total of 3,900, notwithstanding a large falling off in the number of horses recorded, which was due to the dulness in the trade caused by general financial depression and some restrictive regulations adopted by the United States authorities. The seventh volume of the Clydesdale Stud Book and the second of the Swine Record were issued during the year.

The depression which affected the cattle trade also, does not seem to have interfered with the success of the Fat Stock Show, for the number of entries was 372 as against 209 n 1892. Probably this fine showing was in a great measure due to the number of animals which had been prepared for the World's Fair. Over $2,000 were paid in prizes.

Hon. Mr. Dryden again delivered an address at the show. In it he reviewed the success of Ontario's exhibits at the World's Fair, and as the collection of a display had been largely due to the Agriculture and Arts Association we may quote a few of the Province's most striking successes in the agricultural departments. In dairy products, particularly in cheese, she had, as Mr. Dryden remarked, "simply swept the board." In fruit she secured thirty per cent. more than any other state or country. In sheep she obtained about as much as the entire United States; in swine one-third as much, and in cattle one-fourth as much. In poultry she took two-thirds of the entire prize money awarded. If possible the result was the more flattering from the fact that while many of the states had offered additional encouragement above the prizes, to successful competitors from within their limits, the Ontario Government had refused to take any such action.

The reports from the various affiliated breeders' societies embodied in the Association's report for 1893 are not so voluminous as in 1892, but contain one or two papers of value Four plowing matches were held as usual, and as the reports indicate, were almost completely successful.

In view of the fact that because of the increasing revenues from its various enterprises the Council could now manage its business with less assistance from the Government, the provincial grant for 1894 was reduced to $4,600, about $1,000 less than had been the rule of late years.

In 1894 we have again one new member. The change this time was in District No. 4. in which Mr. B Mallory of Frankford replaced Mr. Haggarty. The president elected for the year was Mr. William Dawson.

In 1894 we come to the beginning of the end of the Association's history. The work of the Association went on as usual during the year, but it is difficult to get an accurate account of how that work was carried out, owing to the fact that the Secretary's report for the year which had been carefully prepared and was just on the point of being issued, was destroyed in the unfortunate fire of March 3rd. 1895. along with the valuable library and all the records of the Association which had not previously been published.

The Horse Show was held in Toronto on March 28th, and 29th, rather latter than had been usual. It was not quite up to the mark of that of 1893, and the prize list was somewhat reduced. The utter unsuitability of the building, too small and without any provision for heating as it was, became more apparent on each occasion when the show was held there.

For the Fat Stock Show on the other hand the prize list was extended, and the result was a fair universally admitted to be the best yet held. The receipts were about $1,600 and the expenditure amounted to $3,000.

Only three plowing matches were held this year, two of which were very successful and the third fairly so.

The record of the animals registered during the year has been mostly destroyed. The third volume of the Swine record and the second of the Ayrshire Herd Book were published and the fourth volume of the Swine record got ready for publication.

There was again one change in the membership of the Council. For the first time in its history District No. 8 had a new representative, and the Council lost its oldest member. Mr. J. C. Rykert was the only member of the late Council who had sat on the old Board of Agriculture and Arts, of which body he had become a member in 1866. He had thus served on the Council twenty-nine years, and he had been three times President of the Association, an honor accorded to no other man in its history. His successor was Mr. John E. Cohoe of Wellandport.

The members accordingly for the fiftieth and last year of the Association's existence were as follows:—No. 1. D. P. McKinnon; No. 2. W. C. Edwards; No. 3. Joshua Legge; No. 4. B. Mallory; No. 5. W. J. Westington; No. 6. J. C. Snell; No. 7. Nicholas Awrey; No. 8. J. E. Cohoe; No. 9. William Dawson; No. 10. James Rowand; No. 11. Robert McEwen; No, 12. Albin Rawlings; No. 13. Jonathan Sissons. The last mentioned gentleman was elected president for the year.

On the third of March, as we have already indicated, the building which the Association had erected in 1862, and occupied ever since that time, was completely destroyed in one of the most disastrous fires that has ever visited the City of Toronto. The building had unfortunately never been provided with an efficient system of vaults, and so all the private papers and records of the Association were destroyed, and all the unpublished work of the past year including a large number of registrations, which had to be collected again with a great amount of expense and trouble. During the course of its existence the Association had by the judicious investment of a small sum each year, and the exchanges secured from a circulation of its own publications, collected a most extensive agricultural library. It included an almost complete set of the English and American Stud and Herd Books in the principal classes, besides a great number of other works bearing more or less directly upon agriculture. The library of course was a total loss.

In addition there were lost a large number of volumes of recent issues of the Association's own herd books which had not yet been disposed of and which had to be duplicated

to meet present and future orders. For some further volumes the manuscripts were almost completed, and all the work employed in their compilation completely wasted.

Nothing was left of course of office furniture, and the first step was to secure temporary offices and appliances for carrying on the work.

At the ensuing session the Agriculture and Arts Association was abolished by statute. The work of registration was turned over to the various stock associations. Provision was made for its carrying on to the end of the year its usual work, after which time it was to cease to exist.

At a previous meeting Mr. McEwen and Mr. Wade had been appointed to interview the military officials in Toronto with regard to securing the spacious new armouries for the horse show. Their mission resulted successfully and for the first time proper accommodation for this event was assured. This alone promised success, but when for the purposes of the show an amalgamation was effected with the Country and Hunt Club of Toronto it was predicted that a display would be secured far surpassing anything before seen in Canada. These expectations were more than verified by the event and the horse show held in Toronto in April of 1895 was pronounced by those who had attended the great horse fairs held in the city of New York to compare quite favorably even with those events. Every class of horses was represented at this fair, and prizes were awarded to the amount of over $4,000.

For many years the eastern part of the Province had been claiming that it ought to have some equivalent for the fat stock show held yearly in the west. The absurdity of holding a fat stock show in a section in which the dairy interest was predominant was apparent, and the Council had in 1894 resolved if possible to hold a dairy show somewhere in the eastern counties in the following season. This project it was now resolved to carry out in the last year of its existence, as the dairymen from that section were very urgent. The town of Gananoque was chosen as the centre of the dairy district.

In the fall of this year four successful plowing matches were held as usual. The notices of these which appear in the local newspapers about where the events were held are all extremely favorable, and indicate a very encouraging amount of interest in the competitions.

The fat stock show held at Guelph was much the largest and most successful yet conducted, the premiums offered being about $3,500. The total expenses were about $3,700 and the receipts about $1,800. The annual address, delivered by the last president of the Association, Mr. Jonathan Sissons, contained, besides a brief account of the events of the year and the winding up of the Association, a resume of what had been done in the fifty years over which the work of the Association extended.

Both the receipts and the expenditures this year were unusually heavy. The fire made necessary a large office expenditure during the year, and the reprinting of the destroyed herd books was a heavy extra item. To clear itself the Association had at the end of the year to obtain from the Government the balance of the year's rent for the real estate owned by the Association which the Government had appropriated in April. With this it was enabled, after everything had been settled, to hand over to the Government a final balance of something over $250.

We have finished the history of the Agriculture and Arts Association. On the first day of January, A.D. 1896, that historic body ceased to exist.

With such a record, and with the certainty that its work is still going on, and ever will go on, the Agriculture and Arts Association, and all who from time to time have shared its work, may surely rest well content.

EIGHTH ANNUAL REPORTS

OF THE

INSPECTORS OF FACTORIES

FOR THE

PROVINCE OF ONTARIO

1895.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, 68 AND 70 FRONT ST. WEST.
1896.

EIGHTH ANNUAL REPORTS

OF THE

INSPECTORS OF FACTORIES

1895.

To His Honor the Lieutenant-Governor of Ontario :

The undersigned has the honor to transmit herewith the reports of the Inspectors of Factories for Ontario for the year ending December 31, 1895.

Very respectfully submitted,

JOHN DRYDEN,
Minister of Agriculture.

EIGHTH ANNUAL REPORTS

OF

INSPECTORS OF FACTORIES.

WESTERN DISTRICT.

To the Honorable the Minister of Agriculture :

SIR,—I have the honor to submit the following Report of Factories Inspection in the Western District of the Province, for the year 1895.

The year has not been remarkable as regards factories inspection for anything calling for special mention beyond some changes in the law referred to further on in this report. In going his rounds the inspector cannot help but notice in the different factories he visits, whether business is brisk or not. He can tell by the comparative number of employees in their places, by the machines running or idle, by the amount of material in process of manufacture, and by the general appearance of the works, as well as from the information he gathers in conversation with employers and workers. I mentioned in my reports of the two next preceding years that trade was not good, in fact in the year 1894 it was unusually dull, more so than in any year since inspection began. I am glad to be able to state regarding the year now past, that in some industries there were very marked signs of improvement, and in other lines of manufacture, trade was fair; still the majority could not be said to have yet recovered from the depression. In the cotton, woollen and knitted goods factories I was informed that orders were more plentiful than in the preceding year, but with no advance in price, in the face of an increased cost of raw material. Taking the manufacturing trade all through, there was considerable more work for employees, and consequently more wage-money in circulation, which, though not large, would beneficially affect business to a certain extent.

OVERTIME.

This year I have had more applications for overtime permits than at any other time since 1892, which year I granted the greatest number since inspection began. In 1893 applications for these permits fell off nearly one-half, and in 1894 they fell to about one-quarter of those in 1892. This year the applications numbered about as in 1893, and some of them were from industries that, though established before inspection began in 1887, had never before asked for the permit to allow their females to work longer than sixty hours a week. This shows an improvement in these trades, for the reason given for requiring the permit was on account of orders. In writing of overtime, I may state that some employers ask for these exceptions annually, owing to the peculiar nature of their business, such as fruit canning, when fruits would spoil if not advanced to a certain stage in the process; also in the confectionery trade, which is greatest for the Christmas holidays, and some varieties of candy must be sold when fresh, and therefore could not be made long beforehand. Another reason why some manufacturers ask for the overtime

permit is that in these dull times buyers will not place their orders ahead much before the time for selling the goods, and when they do order give scant time for delivery. If the goods are not delivered in time they will cancel the orders. Manufacturers have had so much difficulty in getting orders these last three years that they do not like to have them cancelled, especially when the goods are in process of manufacture, and probably nearly ready for delivery at the risk of not finding another purchaser so late in the season, except at a considerable sacrifice in price. I may also mention that there are many employers of females, especially in cities, where the regular working hours are from five to ten hours less than the legal limit of sixty a week. These often will ask their employees to work beyond the usual hours, that is up to the total of sixty hours a week, which extra employment is accounted overtime by the employers and workers; but is not overtime by the Factories Act till the limit of sixty hours a week is exceeded. In factories where the working hours are less than the legal limit, the time so lost in any week cannot be utilized or worked except in the current week; the lost hours cannot accumulate and be worked at some future time; each week must stand by itself.

Notwithstanding the depressed condition of trade considerable new capital has been invested in manufacturing in my district during the past year and several new factories have been started, among which are four for the manufacture of bicycles, one for iron ore smelting, one bridge works, one for rolling bar iron, one glass works, one carriage works, and several small factories in various lines. A few manufacturers finding that their business had outgrown the capacity of their premises are building new and more suitable factories, modern in every respect as to ventilation, closets, safety of machinery, etc.

Fires.

In the year 1893, in the western district, I had taken note of twenty-four fires in factories, by which in most cases the machinery and buildings were totally destroyed. In the year following only twelve of such fires came to my notice, and this year (1895) I have noticed twenty-seven, of which seventeen occurred in the city of Toronto; in that part of it (all west of Yonge street) which belongs to the western district. On the night of January 6th, a fire started in the building of the Globe Printing Co., totally destroying it and its contents, as well as the whole plant of the Toronto Lithographing Co., Haworth & Co., Brough & Caswell, The Williamson Rubber Co., as well as a number of other buildings not occupied as factories under the Act. Again, not a week later, on January 10th., early in the evening, another disastrous fire occurred in the same neighborhood, destroying the warehouses and factories combined belonging to Messrs. Dunnett & Co., furs manufacturing; Brereton & Manning, furs manufacturing; R. H. Grey & Co., whiteware; Boisseau & Co., clothing; Hart & Riddell, ruling and binding, also seriously damaging the envelope factory of Messrs. Buntin, Reid & Co. Thus eleven factories in two adjoining blocks in one week were destroyed by fire; and again in May, four small wood-working factories in one building were very much damaged by fire. Many of the buildings destroyed by these fires have since been replaced by new ones which the previous proprietors of the old buildings are now occupying in a continuance of the former business. Some of those who suffered loss by the fires have quit business, and some others are re-building in other parts of the city. I am always pleased to find factories being started in new buildings, for I feel sure I will not have the difficulty in having them kept in conformity with the law, as I do in those older ones built many years ago before employers' thoughts were turned to the subject that factory workers needed any consideration outside of receiving their wages.

It is satisfactory to me to know that, so far as I am aware, none of the fires occurred during working hours. I am also pleased to record that only in one instance, since the Factories Act came into operation in 1887, have any employes been injured by a factory being on fire, and that was in 1892, when seven girls had to jump from the fourth story windows of the Strathroy Knitting Co.'s factory. The fire started between four and five o'clock in the afternoon at one end of the building on the ground floor, from the picker which was then putting through a large batch of cotton. I was informed that

the girls had ample time to escape, as many others did from the same room, by a tower staircase near the opposite end of the building from where the fire started, but they did not hurry—on the contrary had to be driven out, as they thought there was no danger. After starting down the stairs seven of them returned for various things they wanted. This short delay cut off all escape except by the windows. By a change in the law during the last session of the Legislature, requiring ropes for fire-escape purposes, to which I will refer after a similar casualty should never occur again.

Changes in the Law.

At the last session of the Legislature several important changes in the Factories Act were made by an Act that is cited as "The Factories Amendment Act, 1895." The first change was in reference to the age at which boys could work in factories. It reads as follows:

2. No boy or girl under 14 years of age shall be employed in any factory, except in the business of canning or desiccating fruits and vegetables and the work incidental thereto, as provided for in sub-section 6 of section 6 of *The Ontario Factories Act*, as amended by section 4 of *The Ontario Factories Amendment Act, 1889.*

This change will not cause much inconvenience to either employers or parents, for the Compulsory School Attendance Act, requiring, with certain reasonable exceptions, all children between the ages of eight and fourteen years, to attend the full school session, has had the effect of keeping out of factories even boys between twelve and fourteen years, who by the Factories Act were permitted to work in factories. Consequently during these past three years very few boys, and but an occasional girl under fourteen years old were to be found in factories; not even in the fruit canning industry, where during the months of July, August, September and October they were permitted to be employed, without regard to age (in preparing fruit or vegetables for cooking), for the reason that machinery now does a great portion of the work that was formerly done by young children.

Next, sub.-section 1 of section 15 in the original was repealed, and the following substituted therefor:

Sec. 3, ss. 1. All dangerous parts of mill gearing, machinery, vats, pans, caldrons, reservoirs, wheel races, flumes, water channels, doors, openings in the floors or walls, bridges, and all other like dangerous structures or places shall be as far as practicable securely guarded.

It will be seen from this section that all dangerous parts of machinery, mill gearing and plant must be protected as far as practicable. This may be taken to include the guarding of saws, shaper and planer knives, and other dangerous tools moved by mechanical power.

Also by section 6 of the Act of 1895, the inspector has power to order a guard against any other danger he may notice about a factory, so far as it is possible to protect it. The section reads as follows:

Sec. 6. In addition to the particulars mentioned in the first sub-section of section 15 of the said *Ontario Factories Act*, and thereby required to be securely guarded, any other particulars which any inspector shall from time to time consider dangerous, and shall give notice to that effect to the employer, shall likewise as far as practicable be secured as in the sub-section mentioned.

This addition to the Act was suggested by the fact that the inspectors frequently saw what they considered dangers that were not, in their opinion, authorized to be guarded against by the Act; also some accidents were reported as happening from causes where they did not previously suspect any danger. To cover such cases the above clause was added to the law. Of course this leaves a great deal to the judgment of the inspectors, and may in some applications of it be the means of a difference of opinion arising between them and employers; but I am sure that when such differences do arise, and the employers can give good reasons why such dangers should not be protected, the inspectors will be reasonable, for they understand it to be the wish of the Government that the Factories' Act shall be enforced in an efficient manner, with as little friction and annoyance as possible. Another important change in the Act, and one that may be the means of saving life in case of fire in a factory during working hours is the following section:

Sec. 5.—(1) Besides the present requirements as to fire-escapes, there shall, in the case of factories over two stories in height, be provided in every room which is above the ground floor, or in so many of the rooms above the ground floor as the inspector shall in writing certify to be in his judgment sufficient, a wire or other rope for every window in the room, or for as many windows in the room as the inspector shall certify in writing to be sufficient.

(2) Every such rope shall be not less than three-quarters of an inch in thickness, and of sufficient length to reach from the room in which it is kept to the ground below, and every such window of every room is to be provided with proper, convenient and secure fastenings and appurtenances to which one end of the rope may be safely secured and fastened.

(3) The said wire or other ropes are to be kept in a coil or other convenient position in the room.

This clause I believe was suggested by a deputation from the Trades and Labor Council, and I was informed that it was a result of the fact that a man and woman escaped from the fifth storey of the Osgoodby building in this city, on the night of January 10th last, when all other escape was cut off by fire and smoke. These two persons slid down an electric wire to within about thirty feet of the ground, and from there dropped into the life net of the fire department. The inference is that if it be possible to escape from burning buildings by a wire, a fair-sized rope, say three-quarters of an inch in diameter, is more suitable. In asking occupiers of factories, where this section applies, to provide ropes for fire escape purposes, I am sometimes met with the argument that girls would never go down a rope from such a great height, but I reply by relating the Osgoodby fire incident. When I sometimes look out of the windows of the upper stories of some of the tall factory buildings, I shudder at the height and thought of going down a rope, and occasionally doubt if girls would make use of this means of escape in case of fire. Still one cannot judge what people will do to save their lives when great emergencies arise. The ropes are not expensive to put in place, and do not in the least increase the danger, but on the contrary are sure to be a benefit should the necessity for their use arise; even if all persons penned in a burning building do not have the courage to avail themselves of them, no doubt many will. I have often heard it stated in accounts of disasters at sea, where females in their panic-stricken state attempt to save themselves from drowning by jumping overboard into the water, thus rushing to meet the fate they would avoid; so in the case of fire panics in factories, the first thought of some of the workers would be to jump from the windows, disregarding stairs, fire escapes, ropes, and other means of exit. It is but recently I read an account where a delicate girl in a factory fainted from physical weakness, and at once some half-a-dozen other girls near her fainted also, through sympathy; so in panics, one or two in a crowd more excitable than others, may in an alarm of fire in a factory, cause nearly all in a room to lose their coolness and judgment just at a time when they are most needed. I think there can be no doubt but that the knowledge of ample means of escape in case of alarm will go a great way towards inspiring confidence and a sense of safety. I can readily conceive of such conditions arising in certain factories on fire that all means of escape combined would be futile in saving all lives: for—

"The best laid schemes of mice and men gang aft aglee."

I believe in factories where large numbers are employed above the ground floor there should be instituted a weekly system of fire drill somewhat similar to that taught in our schools. Fortunately such fires in factories during working hours in this Province are very rare; still it is proper to guard against such contingencies by providing ample means of escape in case they do occur. It is "better to be prepared and not fight, than to fight and not be prepared." I find that a great many employers have already put ropes in place, though this enactment did not come into effect till last July. In this respect, as in most others in connection with the Factories Act, I am glad to be able to state, as I have done in former reports, that for the most part employers, especially those in the larger works, have shown themselves almost invariably willing and ready to conform to the requirements of the Act.

So far the foregoing remarks concerning means of escape from burning buildings apply only to factories where persons are working above the second storey, but there is at least one instance of where many workers, principally females, lost their lives, and others injured, who were working on the ground floor of a cotton factory in England some years ago, for want of sufficient exits, the windows being grated or screened. One

would scarcely believe this to be possible till they knew it to be a fact. Now to go one storey lower, I may mention that in one factory in this city the basement, nearly wholly below ground, was used for printing, the workers being mostly at the front end, and the only stairs at the rear, machinery and paper occupying the floor between. I considered this place dangerous in case of a fire starting near the stairs, which would cut off the only exit, as the windows were covered with gratings. However, business was soon discontinued in this cellar. I have also had one case of men doing wood work in a basement, the only approach to which was by the elevator. I asked here to provide stairs and remove gratings from at least one window. As a rule there is little machinery other than engines, boilers and shafting in basements.

The next change in the Act, section 7, is to the effect that in case of fire or accident in a factory all accidents must be reported to the inspector (not to the Accident Insurance Co., as some think), if the person injured cannot return to his work by the sixth day after. The section reads as follows :

Sec. 7. In case of a fire or accident in any factory occasioning any bodily injury to any person employed therein, whereby he is prevented from working for more than six days next after the fire or accident, a notice shall be sent to the inspector in writing by the employer forthwith, after the expiration of the said six days, and if such notice is not so sent the employer shall be liable to a fine not exceeding $30.

Formerly only certain defined accidents were reportable. Now all of any nature or from any cause are.

Section 8 is entirely new, requiring immediate notice, within twenty-four hours after, of an explosion of any kind, whether of steam, gases or of explosives. The object of this prompt notice is that the inspector may, if he desires, have an early opportunity for making enquiry and examination as to the cause, before traces and effects of the explosion have been disturbed. It reads as follows :

Sec. 8. In case of an explosion occurring in a factory, whether any person is injured thereby or not, the fact of such explosion having occurred shall be reported to the inspector in writing by the employer within twenty-four hours next after the explosion takes place. And if such notice is not so sent, the employer shall be liable to a fine not exceeding $30.

The immediate notice to the inspector required by section 9 is for the same reason as in the preceding section. When an employee is killed or very seriously injured the employer need not wait six days to ascertain whether the injured person will return to his work, before reporting the accident. So all such are required to be reported promptly.

Sec. 9. Where in a factory any person is killed from any cause, or is injured from any cause in a manner likely to prove fatal, written notice of the accident shall be sent to the inspector within twenty-four hours after the occurrence thereof, and if such notice is not so sent, the employer shall be liable to a fine not exceeding $30.

Sec. 10. The Lieutenant-Governor in Council may from time to time appoint a female inspector for the purpose of carrying out the said Acts and this Act, in addition to the other inspectors by law directed.

Agreeable to section 10, the Lieutenant Governor in Council appointed Miss Margaret Carlyle to the position of female inspector of factories, who, after making herself acquainted with the requirements of the Act, began in July her duties of inspecting such factories only as employed female workers, chiefly in respect to sanitary matters, hours of labor, closets, etc. I accompanied her through some of the factories in Toronto, drawing her attention to the different matters coming within her duties. Later on she received quite a number of complaints from girl workers, many of which I feel sure the district inspectors would not have heard of. Her work will relieve the other inspectors of a certain portion of their duties, and thus give them more time to devote to outlying factories that in the past have had barely sufficient attention.

Sec. 11. The time for laying an information in respect of offences and fines under the said Acts or this Act shall be within two months, or where the offence is punishable at discretion by imprisonment, within three months, after the offence has come to the knowledge of the inspector.

As to this section, I may explain that no prosecution for not reporting accidents, and some other violations of the Act, could be begun after two months, and, in the case of certain violations, after three months from the time of the violation ; and generally when

the information of such offences reached the inspector the time for beginning an action had expired; therefore the law was amended as above. It is to be hoped that there will not be occasion to apply this section to a great extent.

Sec. 12. The Lieutenant-Governor in Council may from time to time by Order in Council, notice of which shall be published in *The Ontario Gazette*, prohibit the employment of girls under the age of eighteen, and of boys under the age of sixteen, in factories, the work in which is deemed by the Lieutenant-Governor in Council to be dangerous or unwholesome.

Sec. 13. Schedule A, substituted for the schedule to *The Ontario Factories Act* by *The Ontario Factories Amendment Act, 1889*, passed in the 52nd year of Her Majesty's reign, chapter 43, is amended by inserting therein the words "bakehouses and bakeshops."

As to section 13, regarding the inspection of bakehouses, I may say very few of these employ six persons, and therefore do not come under the operation of the Act. From what I have heard, I have no doubt that there is, in many of them, a very great need of radical changes. A slight modification in the "Act for the further protection of persons employed in places of business other than factories," to the extent of making that Act apply to places employing three persons or more (instead of more than five, as at present), would bring bakehouses under the control of the local Board of Health, so far as this city is concerned.

The passage of this Act of 1895 threw considerable extra work on the inspectors in Toronto, such as preparing a new abstract, consolidating the whole factory laws for printing in pamphlet form for distribution among employers and others, the mailing of the new printed matter to parties concerned, and, finally, revisiting many factories with regard to providing ropes for fire escape purposes, and writing the occupiers of such as must provide them, as to the number and where to be placed. On the whole, it was a busy year from the time the new Act became law in April; more so than is likely to be again for some time.

Accidents.

There were reported to me this year seventy-four accidents, against seventy-three last year. This slight increase may be attributed to a very serious elevator calamity, which caused the death of two men and severe injuries to a third—an accident which factory inspection could not prevent. This remark can be applied to a majority of the accidents reported, as can be seen by studying the appended list of accidents. It is gratifying to note the reduction in the number of accidents since 1892. Below I give the yearly number of accidents as reported since inspection began:

In 1888	50	accidents reported.
" 1889	80	"
" 1890	95	"
" 1891	104	"
" 1892	128	"
" 1893	90	"
" 1894	73	"
" 1895	74	"

For the year 1888, the first of inspection, no factory came under the law unless more than twenty persons were employed. In the following year the law was amended so as to bring within its jurisdiction all factories employing more than five persons. I was not able to visit all such in my district that year, nor were the occupiers, as a rule, acquainted with the law as regarded the reporting of accidents. The years 1890 and 1891 show a further increase, as the employers were becoming more in the way of reporting. The same will apply to the increase of 1892, when the number reached 128, the greatest of any year, owing largely to seven men being killed by one boiler explosion and one injured, and by seven girls being injured by jumping from the windows of a burning factory. Since then the number has steadily fallen to seventy-three in 1894 and seventy-four in 1895. It must now be presumed that the great majority of employers

are aware that accidents must be reported to the inspector, and I believe for the most part they conform fairly well in this respect. It has to be borne in mind, though, that last year in my report I drew attention to the fact that owing to the very dull state of trade a smaller number of persons were working, considerably so, and many of them were on short time, which circumstances would exert an influence in reducing the number of accidents happening. It may, therefore, be taken for granted that the number last year was abnormally small, and that an improvement in manufacturing trades, which though slight was perceptible this year, would necessarily tend to increase the probabilities of accidents happening. As I mentioned in previous reports, the accidents preventible by legislation providing protection to dangerous parts or places are but a small proportion of the whole, and I doubt if the number can be reduced to any great extent. I may also add that I have but little hopes that the number of unpreventible accidents, or those occurring mostly through want of care on the part of the injured person, are likely to be much diminished. On the other hand, I expect to find in future the number of accidents reported will be greater than in the past, on account of the change in the law, as previously alluded to, requiring all accidents to be reported, from any cause, if the injured person cannot return to his work within six days after. In the past several were reported each year that I did not consider as coming within the definition of an accident as the law then was. In future all of these will be recorded.

Coming now to a consideration of the accidents recorded in 1895, there are three among them that were fatal. While this is favorable compared with six fatalities in the previous year, still it is three too many, and two of them at least should not have happened, viz., those that met their death by the falling of an elevator platform or car in a factory in this city in August. The circumstances, as reported to me, were that the elevator car was held at the top story solely by the safety-catches, the cable being unwound. The two unfortunate men jumped on, and after considerable effort released the clamps, or safety-catches, allowing the car, with them on, to fall to the basement—five stories. They were pitched out, and received such injuries as to cause their death within a few hours. The car, in falling, drew up the slack cable, which was lying on the basement floor, entangling another man who was straightening it out, causing him very serious injuries. I was informed that the action of the two unfortunate men in tampering with the safety-clamps was wholly voluntary. Had they reflected they must have known the consequences of such interference. The other fatality, from being struck in the abdomen by a board thrown from a circular saw, is reported as being caused by carelessness. It may be of interest to give the number of fatal accidents reported since factory inspection began, as follows:

1888	1	1892	12
1889	3	1893	8
1890	7	1894	6
1891	3	1895	3

These make forty-three in all, and in addition to this number there were nearly as many in small factories not coming under the Act. The above list does not include several employers killed, as such accidents are not required to be reported. The great increase in the number of deaths in 1892 was, as before stated, owing to a boiler explosion at Staples, killing seven men. These forty-three fatalities, with the 651 not fatal accidents reported since inspection began, together with a number of serious mishaps not reportable, and quite probably a number not reported—not including the many happening in small factories not coming under the Act, represent a great deal of suffering and misery, and many have been mained in various ways for life, some having lost a foot or a leg, others a hand or arm, some an eye, and very many one or more fingers. A few of the victims of injury (fatal and otherwise) were females, for accident is no respector of sex. Youth, also, is among the mained, and old age is not infrequently reported as having met with serious mishap and even death. However, I feel satisfied that the number of unfortunates would have been much greater had not factory legislation stepped in to

enforce protection to dangerous parts of machinery, and some other dangers about factories. How many accidents have thus been prevented it is difficult to estimate, as it is impossible to keep a record of those that do not occur.

Extent of Accidents.

Of the seventy-one non-fatal accidents reported, two persons were injured in the back, forty-three persons had lost or had injured eighty-one fingers (including thumbs), ten arms were hurt, two persons received a serious blow in the abdomen, seven hands, three legs and five feet were damaged, also three persons received injuries to the head or face. Accidents were reported as having happened to eight females, generally a loss of a finger to each, but one unfortunate girl had to have an arm amputated at the elbow.

Cause of Accidents.

Burned by benzine, one; by molten iron, three; cut by planers and shapers, eight; by saws, eleven; sandpapering machine, one; sticks thrown by machinery, six; carrier chain, one; grindstone burst, one; metal shears, four; presses, six; stamping machine, one; twister, one; jenny, one; loom, one; shuttle, one; hot press, one; slubbing frame, one; cleaning in motion, two; gears, two; calender, one. Twenty-eight persons were injured in the wood-working trade, fifteen in the metal industries, nine in the textile trades, two in the paper manufacturing trade. Five persons were hurt while working about steam engines while in motion; two persons seriously injured while putting soap on a running belt, and the others in various ways, eight of which were from five elevators (two fatal). In only one case was the elevator not in conformity with the Act by having only a weak bar across the opening, and an employee leaning against it at noon hour it broke, allowing him to fall to the bottom of the building. The seventy-four reported accidents happened in fifty-six factories.

Boiler Explosions.

I have no knowledge of any boilers having exploded in the Western District this year.

International Association of Factory Inspectors.

Through your kindness I was permitted to attend the Ninth Annual Convention of the International Association of Factory Inspectors of North America, held at Providence, R. I., in September, where I was pleased to renew my acquaintance with Inspectors, ladies and gentlemen, whom I had met at former conventions, as well as to meet with some others for the first time. The Convention was opened by State Governor Lippitt, who pleasantly alluded to the presence of the delegates from the Province of Ontario. Some very interesting and instructive papers were read and discussed with profit to all present. The next Convention will be held in Toronto this coming summer.

I have the honor to be, Sir,

Your obedient servant,

ROBERT BARBER,

Inspector of Factories, Western District.

Toronto, January 31st, 1896.

CENTRAL DISTRICT.

To the Honorable the Minister of Agriculture :

Sir,—I have the honor to submit the following report on Factories Inspection, for the Central District of Ontario for the year 1895.

Amendments to the Act.

Amendments were made to the Factories Act at the last session of the Legislature, amongst the more important of which are :

The exclusion of children under fourteen years of age from factories, unless in the business of canning or desiccating fruits and vegetables.

The provision requiring ropes to be provided at certain windows in factories as additional means of escape in case of fire.

Requiring fatal accidents, or accidents likely to prove fatal, and explosions of whatever nature, to be reported to the inspectors within twenty-four hours.

The change in the time limit for laying an information in respect of offences under the Act.

And the appointment of a female inspector.

It affords me pleasure to bear testimony to the efficiency with which Miss Carlyle, the female inspector has discharged her duties. The number of complaints received by her from females, would indicate that the appointment of a female inspector had not been made too soon.

While some complaints may be unwarrantable, as not coming within the scope of the Factories Act, it is perhaps as well that females and others, who may consider that they are subjected to an injustice, should have an opportunity of making complaint of any grievance, which can be submitted to the Legislature if deemed necessary. Parties making complaints sometimes express fear lest their names should be divulged ; but complaints made to inspectors, so far as the names of complainants are concerned are deemed confidential.

In my last report I suggested that ropes be attached at windows in factories. The suggestion has been adopted, and I believe the presence of such ropes will tend to materially insure the safety of operatives in case of fire. The fact of a woman having, as reported in the press, utilized a telephone wire successfully, in escaping from the fifth story of the Osgoodby building when on fire last January, would tend to show that a three-quarter inch rope would afford more confidence to one similarly circumstanced.

Child Labor.

While children under fourteen years of age, are excluded from being employed in factories, the appearance of some of the young girls in them, renders it desirable to endeavor to verify their ages ; which is somewhat difficult to do, where their births have not been registered. Having obtained the parent's certificates of the ages of some ten girls, whose ages I had reason to doubt were not as represented, I found only five had been registered, two of whom were of the age represented, while three were under age. The mother of one was certain that her daughter was over fourteen years. But having copied certain information I had obtained, I asked her if she lived on such a street and at such a number, when her daughter was born ; if a certain doctor had attended her, and if her maiden name was not so and so, giving name. She having answered in the affirmative, admitted that the certificate which had been given was not

correct. One had got a neighbor to sign the certificate, because the mother could not write. And in another case a son had signed a certificate for the father "by mistake." In cases where the birth of a child has not been registered, a certificate of age from the teacher whose class the child had last attended, might be required as a substitute.

It may be necessary as an example, to prosecute those who give false certificates, in order that their children may obtain work in factories. Employers who obtain certificates, with a view to carrying out the provisions of the Factories Act, have been held exempt from prosecution.

Accidents.

Ninety-two accidents have been reported and ascertained as having occurred during the year, eight of which were fatal. Twenty-four have been caused by circular saws, ten by power or drop presses, seven by buzz or jointing planers, and four by gear.

Malcom Sliter is supposed to have been struck by a belt which came off a pulley, or to have been carried around a shaft. The report of the accident stated that his leg was bruised to a "jelly." He died three hours after the accident. Deceased was attending to engine situated in basement of mill. Mr. Thomson stated that he went to put belt on a pulley, and ordered deceased to stop the engine. Having put belt on pulley, he ordered deceased to start engine. Mr. Thomson also stated, that, although he did not instruct deceased to go to the belt, he saw the deceased between the two shafts, around one of which the belt was intended to run. He heard a crack as if something had broken; and deceased was thrown about twelve feet in an oblique direction from where he had stood. Mr. Thomson and deceased were the only persons in the basement at the time.

Hector Wagar was struck on the neck by a piece of board thrown from a large circular saw, and died two hours after the accident. Having heard the statement of the two men who were working with deceased, at the time of the accident, it would appear that under the circumstances as though the accident were unavoidable. The practice of guiding the cut by hand, through a mill circular saw, when the lumber is crooked, with a view to saving a board from the slab is a very dangerous one. And it would be better to suffer the loss of a board, than to risk the sacrifice of a life.

William Thomson was struck in the side by a board thrown from a circular saw, and died four hours after the accident. Was working at edger, and having raised the rolls behind the saws, the board he had fed into the edger was thrown against him, with the result as stated.

Andrew Thomson was killed by a boiler explosion. The boiler, a second-hand one, was a single rivetted shell, three-eighth iron, twelve feet long, thirty-two tubes, alleged to have been tested to 150 pounds cold water pressure when bought. Had been in use about two and a half years by Mr. Gordon; but had not been cleaned out during that time. Supposed that mud had caked in the boiler and caused the explosion. Considered by a former attendant of engine, that the use of a boiler purger rendered the cleaning out of the boiler unnecessary.

Charles Anderson, killed between driving belt and pulley of engine. Deceased was employed "oiling up" in basement of mill; and it is alleged was told by both engineers not to go near the driving belt of the big engine. The driving belt of engine for operating the Prescott band mill runs about a foot above the floor, and it is supposed that he stepped on the driving belt, trying to make a short cut, thinking that the belt had stopped, as the engines were about stopped, it being time for "oiling up."

Charles Lundstrum fell on a saw, and died the following day. While on slash table trying to clear an obstruction, his foot slipped, and he fell on one of the saws, and was so injured that he died as above stated. It is alleged, that, the men have been repeatedly warned, not to go on the table when the saws are running. The difficulty appears to be, that, an obstruction may occur to the carriers or conveyers, which carry the slabs across the table, causing the conveyers to stop, while the saws continue running. Hence the danger to any one going on the table until the saws have stopped.

O Hoglin was struck in the eye by a sliver which penetrated the brain, killing him instantly. Deceased was not at his regular work, having changed places with the regular attendant, without the knowledge of the foreman of the mill.

John Cooper, a boy, was scalded in a vat. He was stationed at a corner of the building, where a "runway" was erected, for conveying the hogs from the furnace where they are singed, to the apartment where they are cut up. His duty being to push any hog along the runway which might have stopped at the corner at which he was stationed. A short distance from where deceased stood, was an inclined trough leading into a vat of scalding water, into which trough the hogs were dropped from a runway, after they had been stuck. A hog in its death struggle had fallen out of the trough on the ground near where the deceased stood, when the boy left his place to push the hog into the vat. While doing so, a hog came on the runway, struck the wall near the corner, and bounding back struck the deceased, knocking him into the vat. One of the men near by had called to the deceased not to touch the hog, but in the noise caused by the hog's squealing, the deceased would not readily hear the warning.

In the matter of accidents, more especially those resulting fatally, statements are often made that the person injured, had exceeded his duty, or was acting contrary to orders. And if the accident has been fatal, it is difficult to obtain a verification as to the truth of the statement. A case recently occurred, it being stated that the person injured fatally had been doing work which he was not required to do. Fuller investigation brought out the statement from an employee that an assistant foreman had instructed the injured person to perform work, unknown to the manager, in the performance of which, injuries were sustained which resulted fatally.

The Act as amended requires that accidents whereby a person is prevented from working for more than six days next after the accident be reported to the inspector forthwith.

Explosions.

There have been four explosions, but only one can be said to have occurred in a factory proper.

One boiler explosion, where one man was killed, is referred to under the fatal accidents. As only three were employed, the provisions of the Factories Act did not apply.

A somewhat remarkable explosion of a piston, occurred in a blacksmith shop in Parry Harbor, while the piston rod of a "nigger" for canting the logs in a saw-mill, which had become bent, was being heated in the forge, for the purpose of being straightened. The piston was ruptured into several pieces, killing the blacksmith and injuring three other men. It is supposed that a cavity, which had been formed in the end of the piston to permit of the cover being fitted, had accumulated water, from the condensed steam, which water when the rod was being heated, became reconverted into steam with the result stated. One of the injured men noticed steam escaping from a "pin hole," and stated that he was afraid the piston would explode. Just at that time the blacksmith turned the rod in the forge and the explosion occurred. Not having occurred in the mill it was not reported.

An explosion occurred in Woodbridge; while the stopper of a sulphuric acid drum was being unscrewed, the pressure of gas within blew out the stopper and ejected the acid on three persons who were standing around. According to instructions given by the manufacturers of the acid in opening a drum of sulphuric acid, a long wrench should be used in unscrewing the stopper, which should be done gradually, as the gas generated in the drum is apt to escape with force and eject the acid from the drum, rendering it dangerous for any person who may be near. In this case it is alleged that the instructions had been neglected.

An explosion of gas occurred in a lacquer oven. One person was injured. While lighting the gas in the oven, the match went out, he not waiting to turn off the gas,

went for another match, and when he got back the oven was full of gas; as soon as he put lighted match in oven the gas exploded in his face, burning face and hands. It is alleged that there is a standing order that no person in that department shall touch the furnace except the foreman.

As a remedy for burns the following, taken from a newspaper, may be worthy of consideration.

A Cure For Burns.

The suffering caused by a burn upon the skin, whether small or great, is intense, as every one knows, and medical science has only been able, thus far, to palliate, but not to remove the pain entirely. Chance led to the discovery in the Paris Charity Hospital the other day of a remedy which, it is claimed, will cause burns to cease from being painful as soon as it is applied, and which will cause the injured flesh to heal with marvellous rapidity.

Dr. Thierry, one of the surgeons was in the habit of using picric acid* as an antiseptic, and his hands were therefore impregnated with the solution. One day, in lighting a cigarette a portion of the burning match fell upon his hand, but instead of feeling it, he noticed not the slightest pain. A short time afterwards, while sealing a letter, some burning wax stuck to his finger, and though it cauterized the skin, he felt no sensation. This set him to thinking, and he arrived at the conclusion that the acid had, to use his own words, "acted upon the tissues and tightened them."

He began a series of experiments in treating burns with a saturated solution of picric acid. "All pain was instantly suppressed," he says in his report, "after having bathed the wound in a solution of this acid. Blisters did not form, and a cure was effected after four or five days. The only inconvenience was that the acid, which is commercially used in the manufacture of dyes, colored the skin yellow, but these stains rapidly disappeared when washed with boric acid. Picric acid, moreover, is odourless, and is neither caustic, irritating nor toxic in its effects."

The cheapness of picric acid, and the ease with which a proper solution of it may be prepared and kept ready, have induced many of the large manufactories about Paris, whose workmen are frequently burned at their labours, to place jars about within easy reach, so that those injured may be treated with as little delay as possible. In the well-regulated household, too, a bottle of picric acid should be added to the useful stock of domestic remedies always kept on hand. Dr. Thierry does not say how much water to use in the solution; but a pound of acid in a barrel of water is the proportion used in some French foundries.

In all factories where accidents are liable to occur, bandages and a few other requisites, kept under the charge of certain of the men instructed to render assistance in emergencies, would be of service until medical assistance could be obtained. A case was reported to me of a boy who had a finger taken off and whose hand was otherwise injured, who was allowed to go to a doctor with only his handkerchief over the wound, the blood forming a trail on the side-walk. The boy should certainly not have been allowed to go alone, even if no requisites for accidents were kept in the factory.

As there are still some who neglect to report accidents as required, I desire to call the attention of such to the change in the Act, extending the time limit for lodging information for a contravention of the Act; which now reads: "The time for laying an information in respect of offences and fines under the said Acts or this Act shall be within two months, or where the offence is punishable at discretion by imprisonment, within three months, after the offence has come to the knowledge of the inspector."

*It may be as well, however, to quote the following from Cooley's Cyclopedia of Receipes, Vol. II., page 1,292, published in 1880. Under the head of Picric Acid, Professor Rapp is quoted as an authority that, "it acts deleteriously both when swallowed and applied to the unsound skin. Five grains seriously affected a large dog, and killed it within twenty-four hours. It induces vomiting, feebleness and general loss of nervous tone. The tissues of animals poisoned by it (even the white of the eye) were tinged a yellow colour."

Boiler Inspection.

I would again urge the necessity of boiler inspection. It is in the smaller industries where defective boilers are most likely to be in use, and where necessarily the greatest danger lies in regard to boilers. Unless legislation, dealing with the inspection of boilers would include all such as are used for generating power, such legislation I believe would fail in its object of providing for the safety of employees. I would again state as in my last report, that I am of opinion that the owners of all boilers, as may be defined under any Act which may become law, should be required to have said boilers inspected once in each year, when such boilers have not already been inspected; said owners to be held accountable that the person so inspecting the boilers shall be competent to do so. By allowing owners to have their boilers so inspected they could select such times as would be most convenient for them. A certificate of the inspection of the boiler and date of inspection might be required to be kept, subject to its being required to be produced by any one authorized to require its production.

Convention of Factory Inspectors.

I had the privilege of attending the Ninth Annual Convention of Factory Inspectors of North America, held at Providence, R. I Many instructive papers bearing on the welfare of the workers were read and discussed. Amongst these were some papers on the sweating system, and a discussion thereon, showing the difficulty of individual States dealing effectually with the evil. This resulted in the adoption of a motion that the Federal Government could best deal with the matter, it being considered that a uniform prohibitory tax in every State on manufacturers who gave out clothing and other specified articles to be made up in tenement houses, would be the most effective method of checking the evils of the sweating system.

The views of the Convention may be said to be embodied in a bill which has been introduced into Congress, a copy of which has been sent to me. It may be well to quote some portions of the bill, as illustrating the proposed method of overcoming the evils of the sweating system.

"That every person, firm, co-partnership, company or corporation engaged in the manufacture or sale of shirts, neckwear, cloaks, coats, overcoats, vests, trousers, underwear, cigarettes, cigars, furs, or fur trimmings, who shall give out the goods or material of which said articles are made for the purpose of having the same made up or manufactured in rooms or buildings occupied for eating, sleeping or domestic purposes, except by the watchman or janitor thereof, including his family, shall hereafter pay a tax of three hundred dollars annually for each person with whom a contract or agreement to wholly or partially manufacture or make up such articles shall be made."

The second section requires the tax to be paid to the collector of internal revenue for the district, before giving out the goods to be made.

The third section provides that the Act shall be enforced by the various collectors of internal revenue in their respective districts.

Section 4 reads: "That the provisions of this Act shall not be construed to affect any person or persons in the direct employ of any person, firm, co-partners, company or corporation occupying premises not used for eating, sleeping or domestic purposes, and which are leased, rented or owned by the person, firm, co-partners, company or corporation which owns, or gives out to be wholly or partially made, the goods or materials mentioned in section one of this Act; and where all the persons engaged at labor therein are paid regularly by such person, firm, co-partners, company or corporation and not through the medium of a middleman or contractor."

The fifth section provides that any violation of the Act shall be punishable by a fine not exceeding one thousand dollars, or by imprisonment not exceeding one year, or by both in the discretion of the court.

THE LABOR EXCHANGE.

Enquiries have often been made by persons out of work if I knew of any place where they would be likely to obtain work. Unfortunately, owing to the "surplus" of labor, there are more seeking employment than are able to obtain it. A system of labor exchange has been inaugurated in a number of the United States. The objects of the association are :

1st. To provide employment for idle labor by facilitating the interchange of commodities and services among the associates and the public.

2nd. To alleviate the suffering incident to, and avert the social dangers which may arise from a constantly increasing class of unemployed by furnishing to this class useful occupation and saving the wealth thus produced for the use of actual producers and their dependents.

3rd. To lighten the burden of charitable institutions by establishing one self-sustaining.

These objects certainly commend themselves as worthy the consideration of all who are desirous of solving the problem of the unemployed.

Twelve permits for overtime were granted during the year.

Appended is a list of the accidents.

I have the honor to be, Sir,
Yours respectfully,

JAMES R. BROWN,
Inspector of Factories,
Central District.

TORONTO, 31st January, 1896.

EASTERN DISTRICT.

To the Honorable the Minister of Agriculture for Ontario :

SIR,—I have the honor to submit my report of the inspection of factories in the Eastern District for the year 1895.

AMENDMENTS TO THE ACT.

The Act has been amended in some very important points, which has necessitated the giving of some new information and notices to the employers during the year. One of these, and the most important, is the increase of minimum age at which boys can be employed to fourteen years. I regret that the minimum age for girls has not also been increased to the same, and also that boys younger than sixteen and girls under eighteen years of age could not be employed if illiterate. Such an enactment would greatly help the school law by compelling children of a certain age to attend some school, and thereby improve considerably the standard of the future generation.

The Act, which is calculated to prevent accidents and injury to workmen and to protect them from the dangers of machinery used for the purpose only of saving manual labor regardless of its character, should extend to all mills and factories where machinery and power or either are used, as in my experience I have found places of a most dangerous character which are not reached by the Act on account of the limited number of hands therein employed.

FEMALE INSPECTOR.

The appointment of a female inspector will also be of much benefit to the employees, if the inspection is so made as to not clash with that of the male inspector, as such an inspector would more easily reach the female employees and receive from them such information and complaints as would not otherwise be given or made to the other inspectors.

There are also a large number of establishments where none but females are employed, and where no machinery or power is used, which could come exclusively under the inspections of a female inspector, and I have no doubt that the time will come when some assistance will be required to the present inspector. The Government could place all stores, millinery and tailor shops under the operation of the Factories Act, thus affording considerable protection to a large number of girls who very often do not receive all the attention that their positions and constitutions require.

I have this year noticed that there was no such pressure of work in the factories as I have remarked the previous years, and I found several which were closed, some awaiting orders and others dismissing their hands on the slightest pretext of repair. On several occasions I have been obliged to make a second trip to be able to inspect.

COMBINED INSPECTION.

In making suggestions or ordering more protection to machinery, alterations or improvements for the better safety and convenience of employees, there often arises a difference of opinion between the inspector and employer, either with regard to the necessity of carrying out the orders or suggestions given and made by the inspector, or as to the nature of the improvements. The inspector cannot be master of all the duties devolving upon him ; he therefore is at times unable to insist upon any special alterations or protections, and through fear of interfering with the operation of the machinery will defer the enforcement of his orders until some accidents occur. To obviate any difficulties

in this respect, I consider that it would be very beneficial if a general inspection of the main factories throughout the Province could be made by the three inspectors together, so as to fully determine the extent of protection required and necessary to all machinery in use, and its character. It would also establish a uniformity of action in the operation of the Act which would strengthen the hands of each inspector. I have met with some such cases, and in most of them the employer was merely seeking to dispense with the expenditure such protection would entail. In some of these cases employers would not admit the necessity of fire escapes other than the ordinary stairways in the building, but since the conflagration of the McDonald tobacco factory in Montreal most of them are now willing to put up fire escapes so as to protect themselves against claims for damages in case of accident.

Electric Alarm Bells.

I consider it my duty to draw the Government's attention to a suggestion which I made in one of my previous reports with regard to the necessity of placing in each workroom an alarm bell that would be distinctly heard by all employees, for the purpose of giving warning every time the machinery is to be put in operation by the power, whether water, steam or other. On my tour of inspection I stood in a large sawmill when the machinery was stopped and started without any sufficient warning and with great danger to the employees.

Machinery and Elevators.

I regret to have to report that I have not found the machinery, belting and shafting as well protected as at my previous inspection. In some cases it was due to alterations to the mills, when they had neglected the guards, while in other cases the guards had been taken off for some purpose or other and they had failed to replace them. I have found for three consecutive inspections the covering of edging saws, which are the most dangerous machinery in a sawmill, taken off and left alongside of the table in one sawmill and twice in another mill. The belting and shafts, which are not located near to where persons are employed or have occasion to pass, are generally considered as requiring no covering. These unprotected shafts and belts are, however, the more dangerous from being isolated, as there is less light to them and in case of accidents no timely assistance can be rendered, as there are no persons in the immediate vicinity. In all cases I have given imperative instruction to cover and fence in all such places.

Another source of danger around machinery is the loose clothes worn by the employees and the long, loose hair carried by the women and girls in factories. I have in some instances drawn the attention of the employers to it, who have in all cases told me that they were powerless to prevent these evils. I consider that it will become necessary to provide for the prevention of these sources of danger by some legislation, and to make it imperative to all employers to supply nets to young girls or women having long hair before they are allowed to work near to or with any machinery and also to prevent the wearing of wide, loose clothes on the pretext of fashion. I am glad, however, to say that several have noticed the warning given in my previous reports on this subject, and have been contemplating the advisability of carrying it out.

The elevators in all factories in my district are equipped with all the necessary safety catches and automatic gates and doors, and I have found none that do not comply with the requirements of the Act.

Fire Escapes and Fire Protection.

All the factories in my district are well provided with fire protection, and in most cases, especially where there is a waterworks system it seems almost impossible for any fire to make sufficient headway to endanger the lives of the emyloyees working therein.

Still, as there is a possibility, slight though it may be, of the fire protection provided failing to do the work expected from it, and which it is intended it should

perform, it became a necessity to provide for the escape of all employees in such a short time as to not be overcome by any fire. For that purpose and with that object in view, all factories where a considerable number of hands are employed over the second story should be provided with a sufficient number of safe exits. The Act requires that buildings used as factories, if more than two stories in height and having persons working over the second story, should be provided with iron outside stairways and balconies, leading from the attic to the ground, with landings at one window in each story, having iron shutters. Whilst I have been obliged to accept these fire escapes as sufficient under the Act, and in one instance I have given a certificate that such a fire escape was a full compliance with the requirements of the Act, I am still of the opinion which I have expressed in some of my previous reports and to all employers, that I do not consider these fire escapes adequate to all the emergencies that may arise in a conflagration or in a panic. In nine cases out of ten a fire is not foreseen or no measure is taken in case of fire, beyond the building of the fire escapes. The available room leading to the landing windows is blocked with one thing or another, and in some cases, as I have seen this year, machinery is set quite close and across the window, leaving such a narrow passage to it that to reach it in a hurry it would be necessary to pass over the machinery. In another instance I have seen the window so blocked and frozen in the winter that I have ordered an axe to be kept at each landing.

Again, in the excitement in the case of the fire originating in a room where a large number of females or children were employed, many would not look to the landing window for safety if the passage to it is not clear; and if they do reach it in their attempt to go out with all their difficulties the first out would be pressed over the railing or tumbled down those steep narrow stairs. The only absolutely safe fire escapes in a large building of more than two stories, where a large number of hands are employed above the second story, are large stairways placed, one at each end of the building, separated from the room by a brick or stone wall, having at each story fire-proof doors opening both ways and used ordinarily by the employees in going from or coming to their work. This is one of the questions which should receive considerable attention from the inspectors, and is of such importance as to require their united co-operative inspection.

Boilers.

The question of boilers is in the same position as reported last year, being still surrounded with the same dangers, and will remain so until the law is changed in that respect. The accidents by explosion which have occurred both in the Province of Ontario and elsewhere, and the extent of damage and loss of life caused by the explosions, should be sufficient reasons to compel all factories to place them outside of the main building, and protect any workroom adjoining by a solid brick or stone wall. All boilers should also be subjected to official inspection by some competent and practical person, so that none would be allowed to be used unless perfectly safe, nor to carry more pressure than their capacity would warrant.

In the Province of Quebec practical men are allowed to pass an examination before a Government Board from whom they receive a certificate of competency if successful. Then these men can be employed by the owners of boilers to inspect their boilers, and their certificates as to their safety and capacity is accepted by the inspectors of factories; but in no case is a manufacturer allowed to use a boiler unless he produces a certificate of such inspection except that certificates from insurance companies are also held as sufficient. This method should be adopted in this Province, and the Factories Act amended to that effect. It would also be necessary that no engineer or fireman be employed without having secured a certificate of competency.

Ventilation and Cleanliness.

I have found all factories in my district kept in a very clean state; the ventilation is generally very good. I have observed improvements in many of the factories, especially in sash and door factories in Ottawa, in the way of ventilation to remove the dust and

steam from the work rooms. I have, however, to state that in the rag picking room of the Toronto Paper Mill, in Cornwall, there is yet a necessity to continue the extension of their suction pipe which has been placed with so much advantage for the purpose of removing the dust during the winter season, when the windows cannot be kept open during working hours. The small kindling wood factory in Hawkesbury village, in the County of Prescott, has in no way been improved in this respect. I was assured, however, by the manager, that the proprietors contemplate building an addition to it this year, when ample provision will be made for ventilation. In this factory, which is already very small, they have placed a boiler which has been in use for a large number of years previous to its erection, and which seems to be overtaxed to run the machinery, thereby increasing the danger of an explosion. I have ordered that this boiler be placed outside of the main building without delay.

The water-closets I have found sufficient in nearly all the factories, although in some of them they could be improved as far as the privacy and separation for males and females are concerned.

Child Labor.

I have always considered the employment of children in factories one of the most important questions to be dealt with by the inspector, and I have always given it a considerable amount of attention and consideration. When I made my first visits of inspection I was amazed to find so many children of tender age and weak constitution imprisoned for long days during a whole year in work rooms of factories deprived of the advantages of education, and also of the benefit of open air exercise so necessary and beneficial to their proper physical development, and thrown in with a number of grown up persons who, unmindful of the child's age, would in his presence use obscene language to the great danger of his morals. I have subsequently observed these children both at work and outside, and in nearly all cases I regretted to see a generation destined to become retrograde. I have vigorously enforced the law, and in every one of my reports I have requested the Government to raise the minimum age at which these children could be employed. I am pleased to be able to report that this year I have very few children under age employed in factories, and that the minimum age was raised two years for boys. I only hope this will soon be followed by another amendment that no girls under sixteen years of age could be employed in factories, and no boys under sixteen years could be employed in saw mills; and that in no case could boys be employed under sixteen and girls under eighteen, if they are illiterate.

Accidents.

Very few accidents have occurred in my district this year through machinery in factories or saw mills. One occurred in July at the Canada Lumber Company Mills, by which a boy named John Logan lost his leg, it having become entangled in a chain near a butting saw table.

In the same month a young man of nineteen years of age had his arm hurt in the cog wheels of a carding machine of D. M. Fraser's Knitting Factory. He was two weeks unable to work.

In the month of August, Adams Williams received a flesh wound from a piece of wood flying from the lath mill of Gillies Bros., at Braeside, in the County of Renfrew.

In the month of June (the 26th), a young boy of fifteen years of age, John Harvey, who had gone into a sash and door factory of W. Beatty, of Pembroke, for the purpose of getting some shavings, passed over a horizontal saw down-shaft and got entangled around by his coat. He was killed instantly.

In the same month Patrick McDonald, twenty-one years of age, was struck by a piece of an emery polishing stone, which had broken, while engaged in polishing some pieces of stove doors in the Stove Foundry of E. and D. Smith, at Pembroke. Death was instantaneous.

A couple more accidents have occurred, but I have received no reports or particulars, although I have written to the employers. These will be given at the next inspection.

Two fatal accidents have occurred in small saw mills, but as these mills do not employ a sufficient number of hands to come under the Act, I did not receive any reports, but I hope the Government will be able to include them all, as I have above suggested.

I am pleased to notice that the number of accidents have greatly decreased, due to the reasonable enforcement of the Act, notwithstanding any statements made by persons who seem to forget that if the number appears larger now, it is due to the fact that they are all reported publicly. In any investigation it has also been shown that the majority of accidents were due to carelessness, and that the victims were, most of them, persons who had had several years practice and experience with machinery.

I have granted no permits this year to work overtime to fill in orders. In several factories they seemed rather to wait on orders than to be pressed by them.

I have the honor to be,

Yours most respectfully,

O. A. ROCQUE,

Inspector of Factories, Eastern District.

Orleans, April 22, 1896.

REPORT OF FEMALE INSPECTOR OF FACTORIES.

To the Honorable the Minister of Agriculture:

Sir,—I have the honor to submit the following report of factories inspection in the Province from July 1st to December 31st for the year 1895.

Visits.

During that time I have made 611 inspections, in the following places: Toronto, Ottawa, Cornwall, Prescott, Brockville, Gananoque, Kingston, Smith's Falls, Belleville, Cobourg, Campbellford, Peterborough, Port Hope, Hamilton, Dundas, Brantford, Paris, London, St. Marys, Stratford, Galt, Preston, Hespeler, Doon, Waterloo, Berlin, Guelph, Acton, Glen Williams, Georgetown, Barrie, Orillia, Collingwood, Beeton, Alliston, Clarksburg, Thornbury, Meaford, Owen Sound, St. Catharines, Thorold, Merritton, Niagara Falls.

Several of these places I have visited two and three times, as I considered they required attention.

So far I have not been able since my appointment to get over all the ground in which my duties lie, but, as early as possible in the new year, I shall endeavor to get over the whole Province.

I may say that I have been courteously received, and it is with pleasure that I testify to the good will of the employers in readily carrying out any suggestions I have made, and also to the frankness with which they have acknowledged the good results obtained.

In this connection I wish to acknowledge the valuable assistance I have received from the members of the various Trades and Labor Councils throughout the Province. Especially on my first visit to the different cities and towns have I found their aid of great service.

Sanitary.

It is particularly in the older buildings that improvements are necessary. The newly erected factories are generally well provided for in sanitary matters. I have given a good deal of attention to the sanitary condition of factories and workshops. I have had occasion to give several orders for additional water-closets to be put in where required, for old and unventilated ones to be repaired. In some buildings where a number were, I have had changes made by having one or two, as the case might be, with locks put on, and giving females possession of keys.

There is a class of employers where difficulty arises when asking them to comply with the law. Men who rent old buildings for manufacturing purposes usually acquiesce in the propriety of the changes, but plead as tenants that they cannot afford the outlay, and that the owners delay owing to the uncertain tenure of their leases.

There is a class of foreigners in the clothing trade who do not want to be disturbed in their way of obtaining a livelihood, and cannot understand why separate toilet rooms should be provided for the use of male and female employees. I know considerable good has been accomplished in obtaining better sanitary regulations, relieving the overcrowded workshops, reducing the hours of labor for those employed in the clothing trade; but as long as the system of giving out the making of clothing exists this evil will continue and it will grow. I believe that seventy-five per cent. of all the clothing in the country is manufactured and handled by contractors. Keen competition has led to the present condition of things.

Cleanliness.

Some of the most recently built factories are all that can be desired for the comfort of those employed in the way of having dining-rooms, wash-rooms and good lavatories. The sanitary appliances of factories and workshops are often put in good condition with the expectation that they will be kept so, but I do not find them in that condition of cleanliness that they should be in, caused by carelessness and neglect of those for whose benefit they had been provided.

Child Labor.

I find, comparatively speaking, very few under the age required by the Factories Act. I meet with a good deal of difficulty in learning their proper age. The chief resistance comes from parents and guardians themselves, who, either from necessity or greed, are so anxious to get employment for their children that they will even occasionally furnish a false certificate.

Complaints.

Many complaints have been made to me, some of which have been fully justified; others again have been relating to matters over which an inspector has no immediate power. From facts met with in my inspections it is clear that sound reason for complaint may arise.

Hours of Labor.

Those factories which work the full sixty hours a week are principally cotton, woollen and knitting factories, commencing at half-past six, and stopping at six o'clock, with one hour at noon for dinner, thus making ten and one-half hours per day in order to have a shorter day on Saturday. I consider there is hardship in this, especially in the winter months. They have to start out, beat their path through snow, having no means of conveyance to reach the factories. They then work part of the day with damp clothing.

A very small fraction of the work requires muscular strength, but it is the constant and steady application of the mind, the eager use of the eyes, which exhaust and wear out the human body. The entire nervous system is so intently directed to the detail of

the work, while the machinery is running to its utmost capacity, that by night the workers are not only tired and weary, but well nigh worn out. I trust it will not be long till employers can see their way to give a shorter day without legislation. The hours of employment for females are shorter in cities in almost every industry. A very large percentage of workers leave work at twelve o'clock on Saturday, beginning at half-past seven and eight o'clock, having one hour at noon, quitting at half-past five and six o'clock, thus making from forty-five to fifty-five hours per week.

It is surprising to find how little of the regulations of the Factories Act are understood by the workers themselves. Many factories which are running say forty-nine hours per week, in the trades that are liable to a sudden press of orders, arising from unforeseen circumstances, may require their workers to work, say two evenings in one week, for two and a quarter hours each night, making in all fifty-three and a half hours per week; then the workers consider they are illegally employed.

Noon Meal Hour.

The Act reads, that the employer shall allow not less than one hour at noon for meals, which has been interpreted to mean, that the employees may take less, if they wish. In some cases this has been done for the purpose of making a shorter day on Saturday, others again, to leave half an hour earlier in the evening.

In this matter the girls themselves are not the best judges. There is nothing so efficient as good legislation. It is through this source that work has been made less burdensome for the laboring people. It is not only occupation that is needed for females, but employment that is hedged around with wise laws, so that the least possible harm can follow.

While looking for workshops, I naturally make certain discoveries regarding the unsanitary condition of many places that do not come under the Factories Act. I have always reported such to the medical health officers, and these complaints I know have received proper attention. Good work has been done in this way.

Abstract.

I have had a copy of abstract with my address posted in every factory and workshop where females are employed, that come under the operations of the "Ontario Factories Act," as far as I have gone over the ground.

Rags.

The rag trade seems to be an increasing one. The rags are collected and delivered to the merchant, who in some old building or shed employs a number of women and girls in sorting and packing them. The smell in those places is generally most offensive, and that may not be the worst of it. How many poor people have been tempted by the rag collectors through necessity, to part with garments or bedding of some recently deceased member of the household? It is easy to see how the most careful of health officers may be eluded. The harm may be done before the local authorities know anything about it. A considerable number of shoddy manufacturers have already set an excellent example by putting their rags through a thorough disinfecting process as soon as they are brought to the mill, and there seems to be no good reason why so sanitary a course should not be made compulsory and universal.

Ventilation.

Want of proper ventilation in workrooms is one of the most serious features of clothing and kindred trades. The main idea seems to be to have the room warm, and to effect this fresh air is entirely excluded. I also find that the windows are the only means of ventilation in the room. These are usually carefully sealed and nailed down so t ha

they could not be opened except by removing a number of nails. For at least six months in the year this room is never aired. It is difficult to know how to secure proper ventilation and warming, both of which are very necessary in an occupation in which the workers are in a stooping position, and want of exercise makes it more injurious than absolute hard work. I believe that the large part of the objection to the admission of fresh air on the part of the workers is due to the unsatisfactory nature of the means used to admit it. But each building to be ventilated must be studied separately. To-day there are few public buildings better ventilated than our large factories. The health and well-being of the working people depend, more than anything else, upon the cleanliness and proper ventilation of the room in which they work.

The "protecting machinery," "fire escapes," "permits of overtime" and "accidents," according to my regulations, are to be reported by me to the male district inspectors, who have sole charge over such matters.

I am pleased to acknowledge the valuable assistance I have received from both Mr. Brown and Mr. Barber. They have frankly in every possible way given me the full benefit of their experience, which has made my work much easier than it otherwise could have been.

There is no reason why the condition of the working girl should not be a useful, honorable and happy one. There is honor in every right walk of life. What some *are*, all *might* be. Employ the same means and the same results will follow. It is very evident that work in moderation is healthy as well as agreeable to the human body. It is well that human nature should not have the road of life made too easy. Better the necessity of working and enjoying the fruits of our labor than having all our wishes gratified without effort, as it leaves no object for our hopes and desires.

During this year I hope to obtain as firm a grasp of workshops as has been obtained in factories.

I have the honor to be,

Yours respectfully,

MARGARET CARLYLE,

Factories Inspector.

APPENDIX

A.

ACCIDENT REPORTS FOR 1895.

ACCIDENT REPORT FOR 1895.—WESTERN DISTRICT.

No.	Date.	Employers.	Place.	Business.	Person injured.	Age.	Particulars.
1	January 5.....	Massey-Harris Co. (Ltd.).....	Toronto	Reapers, etc....	— Maloney.....	.....	Back, shoulders and one side burned. Was cleaning down drip boards over a paint tank with benzine; went too near with a lamp, the vapor ignited and set his clothing on fire.
2	April 23.....	" "	Brantford	"	B. Rodgers.....	20	Two middle fingers of left hand caught between crank disc and main frame of engine in starting with crank on the centre. Was operating contrary to rules.
3	January 25.....	The Anthes Mfg. Co. (Ltd.).....	Berlin	Furniture	John Reid....	.....	First fingers off between first and second joint, third off at first joint and tips of fourth off, by shaper.
4	" 26.....	J. Hoodless & Son.....	Hamilton	"	Wm. Walker.....	.....	Finger bruised in picking machine.
5	" 26.....	L. M. Palmer.....	Alvinston	Headings.....	Richard Pierce	.....	Arm caught in gears of heading machine; not serious.
6	February 15....	The Riordan Paper Mills.....	Merritton	Paper	Geo. Lyddecoat	40	Finger smashed in gears of ruling machine. Amputated.
7	" 15...	" "	"	"	Frank Mills	.....	Fingers caught in paper calenders.
8	" 14....	Wm. Gray & Sons	Chatham.....	Carriages	— Barnes	.....	Thumb of left hand cut by circular saw.
9	" 21....	" "	"	"	S. R. Wanless.....	.....	Little finger of left hand badly injured by sanding machine.
10	" 23....	Jas. Goldie	Guelph	Flour	A boy.....	18	Left arm torn in gears of bolters, seven feet from the floor, while oiling. He had been warned of the danger.
11	March 5.....	The S. Hadley Lumber Co. (Ltd.)	Chatham	Planing	John Larkin.....	.....	Fingers of left hand jammed between pile of lumber and end of a board thrown by a circular saw, losing end of fourth finger.
12	February 20....	C. Boeckh & Sons	Toronto	Brushes, etc	Geo. Pepper.....	.....	Two fingers cut by shaper, left hand.
13	March	James Magee.....	London	Planing, etc	Frank Terry.....	.. ..	Three fingers bruised by a block while sawing it.
14	February 11....	R. H. Smith & Co. (Ltd.).....	St. Catharines..	Saws	Wm. Hancock.....	30	Contusion of abdomen, struck by bursting grindstone.
15	March	D. W. Thompson & Co	Toronto	Coffins	— Ashwood	.....	Two fingers of left hand cut by rip saw.
16	January 22.....	Merchant's Dyeing Co	"	Dyeing, etc.....	— Clark..... .	27	Three fingers of right hand jammed in a mangle or press.
17	" 22.....	Hamilton Cotton Co	Hamilton	Cottons	Sarah Archer.....	18	Forefinger of left hand, top split in slubbing frame.

18	May 16	Gurney Foundry Co. (Ltd.)	Toronto	Stoves, etc	John Stein	22	Kidney injured ; struck by piece of wood thrown from saw ; burst one kidney in three pieces ; kidney was removed.
19	October	" "	"	"	A moulder		Foot burned by molten iron.
20	May 31	Norton Mfg. Co	Hamilton	Tin cans, etc	John Robb	15	First finger of right hand cut off in scrap shears at the nail.
21	August	"	"	"	John Frazer	20	First and second fingers of right hand cut. Hand slipped under cutting blade of tin square shears. Not serious.
22	October 18	"	"	"	David Erskin	23	Arm and face injured by falling through an open trap one storey. Not serious.
23	" 25	"	"	"	Jos. Orr	18	Finger tip cut off in square shears.
24	December 14	"	"	"	Jos. Dawson	23	First finger of right hand caught between dies of powor press. Amputated at first joint.
25	April 9	J. Kaufman	Berlin	Planing, etc	John Schlagel		Finger cut by buzz planer, requiring amputation at second joint.
26	June 21	McClary Mfg. Co (Ltd)	London	Stoves and tins.	H. Livermore		End of first and second fingers of right hand cut off by drawing press ; supposed to have accidentally moved the treadle.
27	October 18	"	"	"	John Walcott		Three fingers of left hand crushed in a drop press.
28	" 23	"	"	"	Herbert Wilson	16	Skin and nail torn from first joint of finger, right hand, in a press.
29	December 16	"	"	"	E. Walker		First finger of right hand crushed in a stamping machine.
30	June 17	Anderson & Co	Walkerton	Chairs	John Kroetsch	16	Fingers, third and fourth, of right hand mangled by saw.
31	August 14	Anderson Furniture Co	Woodstock	Furniture	Jas. Manzer	50	Fingers, all of left hand, more or less injured by rip saw.
32	July 8	Aug. Newell & Co	Toronto	Organ reeds	Geo. Sunderland		Hands cut by buzz planer.
33	June 10	Ontario Basket Co	Walkerville	Baskets	— Pannebaker	43	Arm, right, pierced by sliver thrown from a saw.
34		W. Gerry	London	Planing	Wm. Flemming	23	Left thumb cut off by band saw while shifting belt.
35	July	Farmers' Binder Twine Co	Brantford	Twine	Samuel Slater		Fingers, two, cut off partly. Girl started machine while he was adjusting it.
36	April	Watson Box Factory	London	Boxes	Engineer		Fingers, ends of four taken off in pump gear.
37	"	J. G. Dodds	"	Planing	— Dean		Hand cut by circular saw.
38	July 4	Cont'l Twine and Cordage Co	Brantford	Twine	Miss Stevens	19	Arm entangled in a spinning jenny and drawn in by a revolving flyer. Amputated above the elbow.
39	" 27	Can. Col. Cotton Co. (Ltd.)	Merritton	Cottons	Frank Wright	16	Third finger of left hand, taken off. Cleaning inside of carriage wheel of mule while in motion, contrary to orders.
40	August 7	" "	"	"	Maggie Strong	17	Finger, third of left hand, taken off. Caught between temple and breast beam of loom.

ACCIDENT REPORT FOR 1895.—WESTERN DISTRICT.—*Concluded.*

No.	Date.	Employers.	Place.	Business.	Person injured.	Age.	Particulars.
41	August 6.....	The W. J. Gage Co. (Ltd.).....	Toronto	Binding	*Jas. Chas. Howe	39	Elevator cage stuck at top storey and the cable unwound. Howe and Welsh got in the cage and released the safety catch, thus allowing the cage to fall to the basement, so injuring them that they died the same evening.
42	" 6.....	" "	"	"	*Jas. Welsh	18	
43	" 6.....	" "	"	"	Chas. McBride	.....	Leg broken and other very serious injuries. When the cage referred to above fell it pulled up the unwound cable catching McBride's leg and raised him against the ceiling of the basement, causing the injuries.
44	July 23	Universal Knitting Co.....	"	Hosiery	Marg't Thornton.....	.....	Hand cut in a stocking machine.
45	" 20	Greybill Mfg. Co	Waterloo	Furniture	R. M. Gilhuly.....	.....	Right thumb smashed by engine crank while feeling journal.
46	" 31	The Collins Mfg. Co.....	Toronto	Iron shingles ...	Walter Maroney.....	12	Tops of all fingers of right hand smashed in stamping press. Used one hand instead of both to remove the shingle.
47	September	The T. H. Taylor & Co. (Ltd.)..	Chatham	Woollens	Ernest Reed.....	14	Finger crushed in gears of picker. Cleaning in motion.
48	June 10	Toronto Radiator Co. (Ltd.)....	Toronto	Radiators	W. Spence	.....	Burned by molten iron.
49	September 17..	" "	"	"	A moulder	.....	Foot burned by molten iron. Carelessness is reported as the cause.
50	August 7	Wortman & Ward Mfg Co.(Ltd.)	London	Churns, etc.....	*Malcolm Greves... ...	21	Struck by a board thrown from a saw, causing internal rupture. Died next day.
51	" 16.....	Scott & Cross	Toronto	Planing	A man	.....	Three fingers cut off by a buzz planer.
52	" 30.....	Park Bros	Chatham	Machinery	And. Cavanaugh	.....	Foot smashed between arm of gear and frame of boiler plate roller. Large toe amputated.
53	September 4....	Patterson & Corbin	St. Catharines..	Cars	Wm. Griffith.....	.... .	Arm cut, struck by stick thrown by a saw. Five stitches required.
54	" 10 . .	Ontario Pure Food Co	" ..	Canned goods ..	Mrs. Saborn.....	.....	Third finger of right hand cut off at first joint on the feed rolls of corn cutter, between roll and frame.
55	April 1	Can. Col. Cotton Co. (Ltd.)	Hamilton	Cottons	Elizabeth Talbott.....	.....	Struck on forehead over the eye by a flying shuttle. Sight not injured but muscular control impaired.

56	September	The R. Forbes Co. (Ltd.)	Hespeler	Woollens	Violet Hall.....	14	Two fingers caught in cogs underneath; guarded above. Not serious.
57	....	McKinnon Dash Co.....	St. Catharines..	Dashes, etc.....	John Bradt	24	Finger of right hand cut off at second joint by power press.
58	October 3	Sutherland, Jones & Co.....	Romney	Staves, etc	Norman McKinnon.....	.....	Heel caught in log chain, carrier tore it off pulling out a tendon.
59	" 15.....	D. Maxwell & Sons	St. Mary's.....	Agri. impl'm'nts	Thos. Lancaster	.....	Arm broken below elbow while soaping a belt with his mitts on.
60	" 15.....	Bell Organ and Piano Co. (Ltd.).	Guelph	Organs	Wm. Stewart.	70	Hand and fingers severely cut by buzz planer.
61	" 22.....	Taylor, Scott & Co	Toronto	Brooms, etc	J. McAfee	.....	Left arm broken, leaning against elevator bar across the opening, it broke and he fell to the bottom. At noon hour.
62	November 12 ...	"	"	Brushes	Steven Smith.....	.....	Thigh broken; fell down hoist shaft after quitting time, after the lights were out. Was putting his bicycle on the platform, as he thought, but the platform was down.
63	December 20 ...	"	"	"	B. Dolen.....	.....	Two fingers cut by circular saw.
64	September 14...	Vansladen & Co	Sarnia	Bent stuff	H. B. Agnew.....	.....	First finger of left hand cut off and others cut by saw.
65	March 16.... ..	Comet Cycle Co	Toronto	Bicycles	A. T. Haslam	.....	Ankle broken. In coming down on the elevator he touched the safety dog and stopped the cage but did not stop the power and the cable continued to unwind. The dog became free again and the cage fell the length of unwound cable, throwing Haslam down.
66	October 31.....	Semmens & Evel	Hamilton	Coffins	A lad	.....	Wrist cut in sawing a board.
67	November 29 ...	London Furniture Mfg. Co.....	London	Furniture	John Hockins	55	Head and jaw injured. Was looking in elevator well over a side partition; platform came down and caught his head.
68	October	Manson Campbell.....	Chatham	Fanning mills ..	Jas. Gaudion	35	Finger cut by by circular saw.
69	November 20...	Oriental Steam Laundry	Toronto	.....	Mrs. Stewart.....	.....	Left hand burned on a body machine. She placed her foot on the treadle and brought the hot roller down on her hand.
70	December 6	The B. Greening Wire Co. (Ltd.)	Hamilton	Wire goods.....	J. Hoskins	.....	Arm bruised between beater and front roller of loom.
71	....	McCormick Mfg. Co.....	London	Confectionery ..	Wm. Doyle.....	.....	Back badly hurt. Jumping on an ascending elevator, was caught between the platform and top of the opening.
72	September 28...	L. Hahn	Hamburg	Furniture	Julius Kuch.....	55	Thumb split by saw.
73	October 25.....	"	"	"	Chas. Behrend	50	Thumb and middle finger cut by shaper.
74	December 16....	Waterloo Mfg. Co. (Ltd.)	Elmira	Machinery	Adam Riffer.....	.....	Both jaws fractured, left arm and leg severely bruised. Was soaping a drive belt, and was caught between it and the pulley.

* Fatal.

ACCIDENT REPORT FOR 1895.—CENTRAL DISTRICT.

No.	Date.	Employer.	Place.	Person injured.	Age.	Particulars.
1	March 12	Thomson & Avery	Sharbot Lake	*Malcolm Sliter	35	Supposed to have been struck by a belt which came off a pulley, or to have been carried around the shaft. Died three hours after the accident.
2	April 16	Jeremiah Lockwood	Enterprise	*Hector Wagar	38	Struck on the neck by a piece of board thrown from a large circular saw. Died two hours after the accident.
3	August 13	Imperial Lumber Co	Warren	*William Thomson	.....	Board thrown from circular saw, struck him on the side. Died four hours after the accident.
4	" 20	William Gordon	Udora	*Andrew Thomson	67	Killed by a boiler explosion.
5	September 21	James Playfair & Co	Midland	*Charles Anderson	18	Killed between driving-belt and pulley on engine.
6	October 3	Keewatin Lumber Co	Keewatin	*Charles Lundstrom	28	Fell on saw on slash table. Died the day following.
7	" 10	Imperial Lumber Co	Warren	*O. Hoglin	.....	While feeding lath bolter a sliver was driven back by the saws, striking him in the eye, killing him instantly.
8	November 27	Wm. Davis Co., Ltd.	Toronto	*John Cooper	15	Fell into a vat of scalding water. Died on the 1st December.
9	January 3	Thousand Island Carriage Co.	Gananoque	E. White	21	Hand caught on buzz planer. Thumb cut off.
10	" 9	James Smart Manfg. Co	Brockville	William Hunter	27	Left hand bruised by coming between cylinder and bed of machine for cutting wire.
11	" 12	James Hall & Co	"	L. Johnston	60	While operating elevator, car fell ten feet, causing compound fracture of left leg, just above ankle.
12	" 15	James Smart Mfg. Co	"	Samuel Watson	41	Flesh wound on palm of left hand, caused by buzz planer.
13	" 19	Kingston Vehicle Co	Kingston	John Lacy	21	Rib broken by board thrown from circular saw.
14	" 24	" "	"	Alexander Kennedy	30	Trying to remove board bound in circular saw. Top of left thumb cut off.
15	" 26	Dominion Organ and Piano Co.	Bowmanville	John Bailey	40	Thumb cut on circular saw.
16	" 28	Kingston Vehicle Co	Kingston	J. Boucher	44	Palm and fingers of left hand cut on buzz planer.
17	February 7	Canadian General Electric Co.	Peterborough	F. Rouillie	15	First finger of right hand cut off on punch press.
18	" 8	Crossen Car Mfg. Co	Cobourg	Richard Lum	43	Caught on revolving shaft. Tarsal bones of left foot fractured; compound fracture of left fibula; two ribs fractured.
19	" 14	Canadian General Electric Co.	Peterborough	G. Goodfellow	15	Third and fourth fingers of right hand badly lacerated in rollers of small rolling machine.
20	" 15	" "	"	Ida Patterson	16	Loss of nail of thumb of right hand in foot press.
21	" 26	Globe File Works Co	Port Hope	Samuel Alcott	.....	Sore burn on the corner of right eye by hot lead, while tempering files.
22	" 26	Jas. Smart Mfg. Co	Brockville	James Molson	16	Two fingers of left hand bruised in gear of lathe.
23	March 6	Canadian General Electric Co.	Peterborough	J. W. Kennedy	25	First three fingers of left hand broken and lacerated while polishing ampere motor coil; it caught in wheel and struck him on left hand and right breast.
24	" 9	Wilson Brothers	Collingwood	Albert Harris	...	Tops of three fingers and thumb of right hand cut off on buzz planer.

25	" 16	F. J. Weston & Sons	Toronto	Alison Winchester	15	Finger cut with cogs of skiving machine.
26	" 26	Neilson Brothers	Proton	Alexander McKinzey	20	Third finger of left hand cut off betwixt first and second joints, and two other fingers cut, on circular saw.
27	April 17	Knechtel Furniture Co	Hanover	Fred Hilgartner	16	First finger of right hand cut off at first joint in rollers of polisher.
28	May 9	" "	"	Herbert Hallman	16	Bruised and badly shaken by elevator car "dropping down" shaft. Breaks did not act.
29	" 9	Cutler & Savige Co	Kenabutch	Louis Billings	35	Leg broken in two places; log sliding down skid.
30	" 13	Joseph Simpson	Toronto	James Judge	15	Hand caught in gear; tops of two fingers taken off.
31	" 21	Rathbun Co	Deseronto	William Bassett	35	First joint of third finger taken off on saw.
32	" 27	Knechtel Furniture Co	Hanover	Robert Richardson	15	First joint of forefinger right hand taken off on mortising machine.
33	" 28	Rathbun Co	Deseronto	Caniff Kimmerly	35	Forefinger left hand cut off at second joint on circular saw.
34	" 31	Disney Devlin Mfg. Co	Hanover	William Scholtz	18	Middle finger taken off and hand cut; placed hand on circular saw.
35	June 13	P. Payette & Co	Penetanguishene	Frank Baurrie	30	While putting on belt arm wound around shaft, but, as it was running slow, he was only somewhat bruised.
36	" 15	Abbott, Grant & Buell	Brockville	William Joy	19	Hand caught in rollers, flesh and nail stripped off four fingers of right hand to first joint.
37	" 19	W. P. Plant	Norwood	Joseph Harper	22	Two ribs broken by emery wheel bursting.
38	" 19	Cutler & Savige	Kenabutch	George Eaton	35	Leg broken by plank thrown from circular saw.
39	" 20	Toronto Knitting Co	Toronto	Ada Gray	14	Garment caught in brusher machine; forehead cut and nose scraped.
					6 mos.	
40	" 20	J. D. Shier	Bracebridge	George Brooks	34	Toe cut off, stepping on splitting saw frame while saw running.
41	" 24	Rathbun Co	Campbellford	William Rooksby	30	Right arm broken; thrown off a ladder by lumber car striking it.
42	" 25	Wm. McAdam	South River	John Campbell	24	Hand slipped on circular saw, cutting palm and nearly severing one finger.
43	" 24	John Holbert	Burk's Falls	John Walker	22	Bad flesh wound on left arm, came in contact with circular saw under the trimmers.
44	" 25	"	"	Ralph Simpson	24	End of thumb of right hand badly lacerated; caught between lever and cog on car.
45	" 28	Christie, Brown & Co	Toronto	John Kluberger	24	Hand and arm badly bruised in "break."
46	" 28	McLaughlin Carriage Co	Oshawa	Frederick Wigg	47	Thumb of right hand cut off at first joint, and forefinger badly cut on circular saw.
47	July 4	The Rathbun Co	Deseronto	D. McBride	23	Lost piece of one finger on circular saw.
48	" 8	W. J. Crothers	Kingston	Nellie Morrison	17	One finger of left hand taken off in gear; cover had been taken off and not replaced.
49	" 12	Gilmour & Co	Trenton	Joseph Lamord	27	Thumb and first finger of right hand cut off at first joint, on circular saw.
50	" 16	Canadian General Electric Co	Peterborough	W. McMullen	16	Third finger of right hand cut off at first joint, and little finger lacerated, in milling machine.
51	" 17	" " "	"	E. Barrett	16	End of forefinger of right hand crushed in power press.
52	" 17	Gibbard & Co	Napanee	H. P. Lowrey	58	Point of thumb on right hand cut off on buzz planer.
53	" 24	Copp, Clark Co	Toronto	Charles Boylan	25	Foot hurt by lithographic stone falling on it.
54	" 26	"	"	Etta Jones	15	Finger hurt on perforating machine.
55	" 30	P. W. Ellis & Co	"	Raymond Roy	15	Top of first finger of right hand cut off in cutting press.

*Fatal.

ACCIDENT REPORT.—CENTRAL DISTRICT, 1895.—*Concluded.*

No.	Date.	Employer.	Place.	Person injured.	Age.	Particulars.
56	July 30	Rathbun Co	Deseronto	C. E. Thompson	37	Severe cut on abdomen, by saw.
57	August 2	Kemp Mfg. Co	Toronto	Henry Fray	25	Thumb of right hand caught in die of power press.
58	" 3	McDonald Mfg. Co	"	William Turner	19	Top of finger cut off in stamping press.
59	" 9	Wm. Cane & Sons Mfg. Co	Newmarket	William Collins	21	End of thumb cut off on cross-cut saw.
60	" 10	Knechtel Furniture Co	Hanover	Fred. Hilgartner	16	Severely bruised by elevator being moved while unloading cart containing seats, causing cart to fall on him.
61	" 12	Cobourg Woollen Co	Cobourg	Patrick Murphy	25	Great toe badly torn, being caught between gears.
62	" 12	F. J. Weston & Sons	Toronto	John Cain	.....	Eyes seriously damaged by spilling boiler purger on his face.
63	" 14	Canadian General Electric Co	Peterborough	S. Hill	18	Index finger of left hand cut off at first joint on power press.
64	" 17	Rathbun Co	Deseronto	Thomas Culhane	14	Third and fourth fingers of left hand cut off at first joint on circular saw.
65	" 17	A. D. McNabb	John's Island, Cutler P.O.	Timothy Forrest	30	Four fingers of left hand cut off on circular saw.
66	" 21	Canadian General Electric Co	Peterborough	J. Cunningham	35	Face and hands burned by explosion of gas in lacquer oven.
67	" 30	St. Lawrence Foundry Co	Toronto	John Donnelly	33	Foot burned by molten iron.
68	September 2	A. D. McNabb	John's Island	John Newgood	30	Little finger and side of left hand cut on circular saw.
69	" 4	St. Lawrence Foundry Co	Toronto	John Davidson	24	Part of two fingers of left hand cut off on wood planer.
70	" 7	P. W. Ellis & Co	"	Albert Roberts	18	Tip and half nail of second finger of right hand cut off on power press.
71	" 10	John Taylor & Co	"	Albert Mably	37	Middle finger of left hand cut off in lathe.
72	" 13	Canadian General Electric Co	Peterborough	William Carson	18	Thumb of right hand cut of below first joint on punch press.
73	" 25	" " "	"	James Moore	17	Right arm lacerated while running "monitor."
74	" 25	" " "	"	William Morgan	30	Third and fourth fingers of left hand badly lacerated by end of shaft rolling off block.
75	" 27	" " "	"	T. Guerin	15	Second finger of right hand cut off at first joint on foot power knives.
76	October 1	Huntsville Lumber Co	Huntsville	John Morrison	26	Left leg broken at ankle by falling off log.
77	" 2	Samuel McAdam	South River	F. W. Brown	.....	Middle finger of left hand cut off on circular saw.
78	" 15	Globe File Mfg. Co	Port Hope	Harry Roddis	15	Left hand lacerated in a file cutting machine.
79	" 17	Rathbun Co	Deseronto	Harry W. Woodall	43	Lost right hand on tenon machine.
80	" 17	Hough & Harris	Toronto	William Carter	15	Both wrists broken, and he was also considerably bruised. Fell down elevator shaft; elevator having been moved by one of the factories situated above.
81	" 21	The Pedlar Metal Roofing Co	Oshawa	Frank Riggs	20	Lost his right arm at the shoulder by being caught in a belt, and thrown around the shaft.
82	" 26	St. Lawrence Foundry Co	Toronto	George Laidlaw	18	Ends of two fingers cut off below the nails in planer.

83	" 28.....	Canadian General Electric Co...	Peterborough...	J. Foden	40	Right hand cut, lacerated and bruised, while screwing up a gland on engine while in motion.
84	" 31.....	" " " ...	" ...	Walter Saver	18	Second finger of left hand taken off half way down nail; hand slipped on knife while cutting oil paper.
85	November 9....	Globe File Mfg. Co	Port Hope	Thomas Milne	21	First joint of middle finger broken and fourth and fifth finger bruised; while using wrench on bolt head, hand slipped.
86	" 23....	Canadian General Electric Co...	Peterborough...	Walter Irwin.....	18	Index finger of right hand cut off at first joint on punch press.
87	" 26....	" " " ...	" ...	F. Connors	15	Thumb of left hand crushed between piece of iron and rest of emery wheel.
88	" 29....	" " " ...	" ...	J. Cooper	15	Index finger of left hand taken off at first joint in rolls of beading machine.
89	December 2....	" " " ...	" ...	James Mullholland	45	Second finger taken off at first joint, and third finger of right hand taken off below first joint, while armature being put on shaft.
90	" 4...	" " " ...	" ...	R. Drewe	32	Third finger taken off at first joint; hand caught between barrel and brickwork around compound pots.
91	" 12....	St. Lawrence Foundry Co	Toronto	N. McKechnie	34	Heel bruised, falling from a scaffold.
92	" 31....	Wm. Davies Co	"	William Liford	45	Two ribs fractured; slipped on cellar floor and fell against wall.

APPENDIX

B.

AN ACT RESPECTING BAKE SHOPS.

[*Assented to April 7th, 1896.*]

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Bake Shops Act, 1896.*

2. In the construction of this Act the following words shall have the meanings hereinafter expressed, unless a contrary intention appears:

(1) The word "bake shop" shall mean any building, premises, workshop, structure, room, or place wherein is carried on the manufacture, for sale, of confectionery, or of bread, biscuits, cakes or any other food product made from flour or from meal, or from both, in whole or in part, and the said bake shop shall include also any room or rooms used for storing the flour or meal, and also any room or rooms used for storing the confectionery, bread, cakes, biscuits, and other food products.

(2) The word "inspector" shall mean any inspector appointed by order of the Lieutenant-Governor in Council under the provisions of *The Ontario Factories Act*, or any inspector appointed by order of the Lieutenant-Governor in Council for the enforcement of this Act.

(3) The word "employer" shall mean any person who in his own behalf, or as the manager, superintendent, overseer, or agent for any person, firm, company or corporation, has charge of any bake shop, *or* employs any person or persons therein.

(4) The word "week" shall mean the period between midnight on Sunday night and midnight on the suceeding Saturday night.

3. All bake shops, to which this Act applies, shall be constructed as to lighting, heating, ventilating and draining in such a manner as not to be detrimental or injurious to the health of any person working therein, and shall also be kept at all times in a clean and sanitary condition, so as to secure the production and preservation of all the food products thereof in a good, wholesome condition.

4. Every bake shop shall be provided with a proper wash-room, closet, and other conveniences necessary for the health and comfort of the persons employed therein, the wash-room, closet and other conveniences to be separate from the bake shop; and such wash-room, closet and other conveniences shall be kept clean and in a sanitary condition.

5. The sleeping place or places of the employees of every bake shop shall be entirely separate from the bake shop, and no person shall be allowed to sleep in such bake shop.

6. Every bake shop shall be provided with proper means and facilities of escape in case of fire, such means or facilities to be to the satisfaction of the inspector empowered by this Act to inspect such bake shops.

7. No employer shall require, permit or suffer any employee in any bake shop to work more than sixty hours in any one week, except by permission of the inspector, given in writing to the employer.

8. No employer shall knowingly require, permit or suffer any person to work in his bake shop who is affected with consumption of the lungs, or with scrofula, or with any venereal disease, or with any communicable skin disease, and every employer is hereby required to maintain himself and his employees in a clean and healthy condition while engaged in the manufacture, handling or sale of such food products.

9. The inspectors appointed under *The Ontario Factories Act*, are hereby appointed inspectors under this Act, for the purpose of enforcing it, and the Lieutenant-Governor in Council may, in addition, appoint one or more persons as inspectors under this Act, for the purpose of enforcing it, and these inspectors shall have full powers, at all times, to enter and inspect all bake shops, and to institute proceedings at law for the enforcement of this Act.

10. Any employer who violates any section of this Act, or who refuses the inspector admittance to his bake shop, or who neglects or refuses to comply with any lawful requirement of the inspector in connection with the enforcement of this Act, shall for the first offence, on conviction thereof, forfeit and pay a penalty of not less than twenty dollars, besides costs, and not more than forty dollars, besides costs; and for the second offence, on conviction thereof, such person shall forfeit and pay a penalty of not less than fifty dollars, besides costs, and not more than one hundred dollars, besides costs, and in default of payment thereof he shall be imprisoned in the county gaol of the county in which the offence is committed for a period not exceeding thirty days, and to be kept at hard labor at the discretion of the convicting magistrate; and for the third or subsequent offence, on conviction thereof, such person shall be imprisoned in such gaol for a period not exceeding six months, to be kept at hard labor, in the discretion of the convicting magistrate.

11. All prosecutions under this Act shall be brought by the inspectors or any one of them and shall be heard before any two of Her Majesty's justices of the peace in and for the county where the penalty was incurred or the offence was committed or wrong done, and in cities and towns in which there is a police magistrate, before such police magistrate, and, save where otherwise provided by this Act, the procedure shall be governed by *The Act respecting Summary Convictions before Justices of the Peace and Appeals to General Sessions.*

12. Nothing in this Act shall in any way conflict or interfere with the powers and the duties of local boards of health or the officers appointed under *The Public Health Act.*

REPORT

RELATING TO THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS

IN THE

PROVINCE OF ONTARIO

FOR THE

YEAR ENDING 31st DECEMBER,

1894.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, 68 AND 70 FRONT ST. WEST.
1896.

Office of the Registrar-General for Ontario,
Toronto, January 1st, 1896.

To the Honorable George Airey Kirkpatrick, LL.D., Q.C.,
Lieutenant-Governor of the Province of Ontario.

May it Please Your Honor:

In compliance with the Statute in that behalf, the undersigned respectfully presents to Your Honor the Annual Report of Births, Marriages and Deaths for the year ending 31st December, 1894.

Respectfully submitted,

R. HARCOURT,

Registrar-General.

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Office of the Registrar-General,

December 3rd, 1895.

To the Hon. Richard Harcourt,

Registrar-General of the Province of Ontario.

Sir,—I have the honor to submit for your approval the report respecting births, marriages and deaths, registered in Ontario during the year 1894.

Population.

The population for the year 1894, which has been adopted as the basis for the calculations contained in this report, is 2,189,116 being an increase by births over deaths of that for 1893, of 21,656. This means a percentage increase of practically one per cent. during the year, and this rate has been adopted in the various tables.

Births.

The total births recorded in 1894, was 42,051, being a total increase of 843 for the whole Province. As will be seen in Table I. the decreases are, as seen below. In the 13 cities with a total population of 425,163, there was a decrease of 480 births, while in the rest of the Province, with a population of 1,763,953, there was a decrease of 363.

This means a total decrease of rather more than one in the 1,000, in the year, or .52 per cent. If, however, the natural increase of population in cities for 1894 is calculated, we find that the decrease in births amounts to 1.4 per 1,000. In the rest of the Province the decrease was but slightly more than .2 in the 1,000. The ratio of decrease of the cities, as compared with the rest of the Province, was as 1.4 to .2 per cent., when the increase of population is taken into account. The variation in the distribution of this decrease in the several cities is interesting.

The greatest decrease was that in Ottawa, where as before observed, the fluctuations have always been greatest. Kingston with 120, stands next in the rate of decreases; Hamilton has decreased 81; Windsor has a decrease of 47, and Toronto an increase of 48.

The total birth rate for cities, 20.3 per 1,000 in 1894, falls below that in any year in the last decade, as seen in the following table:—

Table of Births in Cities of Ontario per 1,000, from 1885 to 1894.

1885	28.2.	1890	27.4.
1886	27.1.	1891	23.4.
1887	27.5.	1892	20.8.
1888	27.0.	1893	21.7.
1889	29.3.	1894	20.3.

With a steady decennial decrease of births in the Province as a whole, most marked in the cities, it will be of interest to make a comparison with the birth-rates of other countries, in order that we may see whether such a condition exists elsewhere, and if so, to enquire wherein lie the causes of such a phenomenon.

Births according to decennial census, 1860=38.15 per 1,000.

Table of Births in certain Countries with Ratio per 1,000 of Population.

England and Wales.

1883	33.5	1889	31.1
1884	33.6	1890	30.2
1885	32.9	1891	31.4
1886	32.8	1892	30.5
1887	31.9	1893	30.8
1888	31.2		

Scotland.

1883	32.8	1889	30.9
1884	33.7	1890	30.4
1885	32.7	1891	31.2
1886	32.9	1892	30.8
1887	31.7	1893	31.0
1888	31.3		

France.

1882	24.8	1888	23.1
1883	24.8	1889	23.0
1884	24.8	1890	21.8
1885	24.2	1891	22.6
1886	23.9	1892	22.1
1887	23.5		

Massachusetts.

1882	24.73	1888	25.89
1883	25.17	1889	26.19
1884	25.45	1890	25.81
1885	25.12	1891	....
1886	25.37	1892	....
1887	25.80		

Ontario.

1884	23.1	1890	22.0
1885	23.5	1891	21.1
1886	22.0	1892	19.7
1887	21.7	1893	19.8
1888	21.8	1894	19.2
1889	22.6		

What is at once apparent in these tables, is that the birth-rate in every country of Europe and America, where a system of vital statistics has been established, has seen a decline more or less marked in each, but nowhere more marked perhaps, than in Ontario. Assuming, as necessary, in our remarks, the registration in recent years, to be at least as complete as ten years ago, it is apparent that some cause or causes are operant to produce a decline of births so serious, in a still sparsely settled Province, as to call for the attention of all interested in the moral, social and economic welfare of the people.

In a careful study of the decline in births in the United States, in the March number 1895, of the journal of the American Statistical Association, the article reviews the study of Miss Brownell, on the *Significance of a Decreasing Birth-rate.*

Amongst the sociological questions brought under discussion are inequalities of production and consumption, voluntary prevention of conception, etc., due, or to a certain extent caused, by increasing civilization. This latter is considered the direct cause of the decrease in birth rates by Hansen, Longstaff, Fothergill, Billings, Edson and others.

With regard to the second class of facts, referred to by Miss Brownell, viz.: That regarding the increased prevalence of nervous diseases, as illustrated by death statistics,—it is proper to say that the same tendency of such to increase, seems present in Ontario as in the United States. This is probably true, although, with the more general care and increase of inmates of lunatic asylums, together with the more accurate definition of disease in recent years, it cannot be doubted that a number of diseases are now classified as nervous, which before were placed under other headings.

Assuming, however, that there is an undoubted increase of this class of diseases, it may be well to point out that urban conditions, where the wear and tear of life is increased, where competition becomes more severe, where society grows artificial in the degree of its complexity, must necessarily create a draft upon the nervous energy, which undoubtedly tends to a lessening of those functions, upon which procreation so intimately depends.

If then, as has been pointed out in a previous report, the tendency to urbanization has gone on in Ontario as in other older settled parts of the continent, we must conclude that similar effects as seen elsewhere must attend such movements of population.

What this urbanizing tendency means is seen in the following table:

Table of Increase of Cities in United States and Canada.

New York, 1880-1890	25 per cent.
Brooklyn, "	40 "
Chicago, 550,000-1,100,000	110 "
Ontario cities between 1880-1890	49 "

That the process is not confined to this continent is seen in the growth of London, and other continental cities.

London had a population of	3,311,298	in 1871.
" "	4,776,661	in 1881.
" "	5,633,808	in 1891.

As long ago as 1872, the Registrar-General of England made the following statement: "The great cities of the world are every year growing greater. Vienna and Berlin, have increased rapidly. Paris for reasons too obvious and deplorable, has remained nearly stationary since the war, but the population amounted at the last census to 1,851,792 and the capital of France is, after violation by a mob, in the face of her enemies, and of her own citizens still the Queen of continental cities. Rome is no longer a city of ruins, for poets to sigh over, but the living capital of the Italian nations, in sisterly union with Florence, Naples, Turin, Milan and Venice. In no land, however, are the cities greater than in the English Empire. The cities of India are flourishing. The United States are emulating the land of their origin; but England maintains its ascendency and her capital is the greatest the world ever saw. Babylon, Thebes, Rome, were never so populous as London, which has now, within its widest boundary, upwards of four million souls; and has in the middle of 1872, within the limits of the weekly tables, 3,311,298."

In a recent article by Dr. Mott, of Edinburgh, the author endeavors to show that, "the outcome of the modern intellectual development in the production of great social changes, is to produce a widespread physiological dissolution, namely, a lowering of the vitality of the individual."

As a result of civilization, the rich, he tells us, get too much, the poor, too little; people moreover, tend to accumulate in unhealthy towns, to suffer from alcoholism, syphilis, over-pressure of business, etc. A further evil, he believes, results from the fact that artificial selection, is "replacing natural selection," and that medical science preserves degenerate types. Such is but one side of the case. As Dr. H. Campbell, in "The Causation of Disease," remarks, "Imperfect and inferior types are, as I have shown, being perpetually weeded out." In regard to the environment of such, as regards occupation, it must in its very nature, in some instances, be fatal to the development of the individual race. Such is especially true in some large manufacturing cities, where large sections of the population are engaged in indoor occupations, such as woollen manufactures. As Campbell, remarks, "Residence in Central London, rapidly tends to deterioration and family extinction." Mr. Cantlie has been unable to find an individual whose ancestors, from the grandparents downwards, were born and bred in London. The following two cases are the nearest approach to such an ancestry: The first, is that of a man with a Somerset grandfather, whose folks have lived in London, commencing from the grandparents. Height, 5 feet 1 inch; age, 21; chest measurement, 28 inches. His head

measured round above the eyebrows 19 inches, (nearly three inches below the average); measured across from tip of ear to tip of ear 11 inches, (1½ inches below average). His aspect is pale, waxy; he is very narrow between the eyes, and with a decided squint; solemnity intense. If such be the saddest and extreme side of the question, there is yet another already referred to. Not only must the environment of the child after birth, in its influence be fully appreciated, but even more in its ante-partem environment. We must recognize the most important principle, in the evolution of the individual, viz: "*That the influence of environment is great in proportion as it acts early in the life-history of the individual.*"

The truth of this principle has again and again been illustrated by scientists and even in a popular way by the public—both by observation and experiment. But in the question of the bearing of the principle on the matter under consideration, it is plain that whatever influence, whether external or internal, which directs the energy of the nerve centres from those more purely animal and physiological functions of the body, must rob such relatively of their normal energy.

In the bearing, therefore, of this influence on the lowering birth-rate in cities, where, speaking generally, the more acute intellects are found, the statistical results of the studies of Francis Galton in his "Men of Science" may be quoted.

Writing in 1874 regarding the evolution of celebrated scientists, he says regarding "Fertility:"

"The families are usually large to which scientific men belong. I have two sets of returns, the one of brothers and sisters, excluding for the most part those who died in infancy; and the other of brothers and sisters who attained thirty years. In these several cases I have indeed the scientific man himself, and find, on an average of about 100 cases, that the total number of brothers and sisters is 6.30 in the first case, and 4.80 in the second. It is a matter of great interest to compare with these figures the numbers of the children of the scientific men themselves. It is an easy thing to do so with farmers, because the time of marriage proves to be nearly the same in both cases; if anything, the scientific men marry earlier than their parents.

It remains to eliminate all cases of absolutely sterile marriages on the part of the scientific men, and those in which there might yet be other children born—I find the number of their living children (say of ages between 5 and 50) to be 4 7. This implies a diminution of fertility as compared with that of their own parents and confirms the common belief in the tendency to an extinction of the families of men who work hard with the brain. On the other hand, I shall show that the health and energy of the scientific men are remarkably high; it therefore seems strange that there should be a falling off in their offspring. I have tried in many ways to find characteristics common to those scientific men whose families were the smallest, but have only lighted on one general result, which I give provisionally, namely, that a relative deficiency of health and energy, in respect to that of their own parents, is very common among them. Their absolute health and energy may be high, far exceeding those of people generally, but in respect of a notable falling off from the yet more robust constitution of the previous generation, it is this which appears dangerous to the continuance of the race. Many figures give the remarkable result that there are no children at all in one out of every three of these cases. I think that ordinary observation corroborates this conclusion, and that those of my readers who happen to have mixed much in what is called intellectual society will be able to recall numerous instances of persons of both sexes, but especially of women, possessed of high gifts of every kind, including health and energy, but of less solid vigor than their parents, and who have no children. I do not overlook the fact that the scientific men are an urban population, being mindful of results I have published elsewhere, which show a similar diminution in the average fertility of townsmen as compared with country folk; but this would not account for their being less prolific than their parents who were also townsmen, or for the large number of wholly sterile marriages."

We have thus had set forth the two elements, in both the lower and higher classes of urban populations, which seem to tend directly to the reduction of the birth-rate, and which, were it not for that enormous influx of some of the most vigorous and energetic of the rural population, would tend to reduce this urban birth-rate by a still greater rate.

Remembering, however, the fact, as set forth in the report for 1893, that in Ontario there had been, in the census years 1881-1891, an absolute loss of rural population in the province of 62,427 or 1.5 per cent., or a loss of 12.6 per cent. between the actual and calculated natural increase, while the increase in the cities amounted to 126,326, or 49 per cent., or 38 per cent. more than the calculated natural increase, it is manifest that in these two natural and apparently inevitable results, we have operating two forces of the most serious import to the progressive development of a native race, indigenous to the soil, in harmony with the spirit of its institutions and ambitious for the development of a people, proud of its traditions, and rejoicing in the hopes of a glorious future as a nationality. With a population of only thirty to the square mile of the rural population, in the older cultivated counties it is manifest that any question of "the struggle for existence," or the survival of the fittest, ought not yet to be heard of in Ontario, even in undertones, as an excuse for propounding the reasonableness of the doctrine of Malthus. Have we any reason for believing that in Ontario the operation of its principles has played, or is playing, any practical part in the depression of the birth-rate in a young and still vigorous community to a total of 19.8 in the thousand, and of only 20.3 in our 13 cities? In the study by Miss Brownell, showing the relation between a falling birth-rate and the increase of nervous diseases in American States, she has evidently overlooked the fact that with urban conditions quite as complex in England and continental Europe, the birth-rate in Germany in 1892 was 35.7, and in England was 30.5 per 1,000. That the decline in England was nearly normal is seen in the fact that the marriage rate in 1892 was 7.7, as compared with the average of 8.05 for 55 years. This normal relation is equally well seen in Ireland, where its birth-rate of 22.95 is associated with the fact of a marriage rate as low as 4.4 per 1,000. While nervous diseases have undoubtedly increased in England, it is quite apparent that the influence has not yet been of the extreme kind indicated in the comparisons drawn from the last American census. The contrast is yet more marked, when the rising marriage rate in several of the Eastern States is remembered. Thus after deducting divorces from the marriage rate we have in New Hampshire a marriage rate of 8.16 and yet the birth-rate has declined to 19.1 per 1,000. The most notable phenomenon in this connection is in the fact of New Hampshire having in 1892 divorces to the extent of 8.5 per cent. of the total marriages.

The difficulty of such an explanation for the falling birth-rate as that given by Miss Brownell is increased, when the following figures for the Michigan Statistical Report for 1892 are given:

There were in Michigan, according to the census of 1890, 685,424 persons of native birth between 15 and 45 years of age, and 314,323 persons of the same ages of foreign birth. There were 18,368 children born to native couples, or 26.8 per 1,000, and 18,344 to foreign parents, or 58.4 per 1,000. These latter figures are undoubtedly too high, but they establish the existence of facts, hardly explainable on a basis of deaths from nervous diseases of every class, amounting to but one per 1,000.

In Ontario we find that under the two headings, apoplexy and paralysis, which include most of the nervous diseases affecting adults, the deaths were, in 1893, but 1 in 23 deaths, or .58 per 1,000 of population.

In order to in some degree discover the actual birth-rate in Ontario from a given number of marriages, an abstract has been made, as seen in the following figures, of the marriages which took place in Toronto in 1892, and the births resulting therefrom up to the end of 1893:

Total marriages celebrated in Toronto in 1892	1,609
Total marriages celebrated of persons resident in Toronto	1,140
The marriage rate according to calculated population of Toronto by natural increase	5.8 per 1,000
Total marriages in 1892 of non-residents (25 per cent.)	469
Total births to end of 1893 from marriages of persons resident in Toronto	361
Average age of females married in Toronto in 1892	24.06 years.
Average age of females married in Toronto, non-resident, in 1892	23.83 "

The following table shows the distribution of the 1,140 marriages celebrated in Toronto in 1892, and the number of children born therefrom and registered up to the end of 1893 :

Number of Marriages and Births by Age Periods of Females in Toronto.

MARRIAGES.

Age periods.	15 20	Per cent. of whole.	20-25.	Per cent. of whole.	25-30.	Per cent of whole.	30-35.	Per cent. of whole.	35-40.	Per cent. of whole.	40-45	Per cent. of whole.
Totals	145	12.7	571	50	281	24.6	86	7.5	37	2.9	20	1.7

BIRTHS.

Age periods.	15 20.	Per cent. of whole	20-25.	Per cent. of whole.	25 30.	Per cent. of whole.	30-35.	Per cent. of whole.	35-40.	Per cent. of whole.	40-45.	Per cent. of whole.
Totals	49	13.5	193	53.4	93	25.7	17	4 7	6	1.6	.....	.....

These figures are of much interest and importance and supply much valuable information. They show that in the first three quinquennial periods of productive female life 87.3 per cent. of all marriages took place, leaving only 12.1 per cent. for the remaining 15 years. They further show that of the total births 92.67 per cent. took place in the first 15 year period and but 6.3 per cent. in the second. They likewise show that relatively the three year periods 15-20, 20-25, 25-30, have a greater percentage of births by 0.8 per cent., 3.4 per cent. and 1.17 per cent., compared with the total births, than the marriages for these periods compared with the total marriages.

It is further interesting to note the fact that the fertility of marriages in the first three five year periods is almost equal, they being 15-20 years, 33.7 per cent. ; 20-25, 33.8 per cent., and 25 30, 33 per cent. At later age periods the ratio of births to marriages decreases very rapidly, it being for 30-35. 19.9 per cent., and 35-40, 16.2 per cent., no births being recorded for marriages of females over 40 years.

Some interesting comparisons may be made between these figures and those of England and other countries. Dr. Farr, Registrar-General of England, in his census report of 1871, stated that 8 out of every 10 brides and bridegrooms at their first marriage are between 20 and 30 years of age, their mean age being 25, that of the bridegroom 25.65 and of the bride 24.3 years. It will be seen that, counting all marriages in Toronto, almost exactly 75 per cent. of the females were between 20 and 30 years of age, a rate slightly below that in England. This is due to the fact that the average age at marriage is somewhat lower than in England, being 23.83 years. In other words it would seem that rather more persons were married in Ontario between the ages of 15-20 than in England. But according to the Registrar-General's Report (England) rather more than 20 per cent. of all marriages in the years between 1866-1886, were under 21 years. As, however, in these tables age 20 is added to the second period, we find that if this is added to those under 20 it makes a percentage of 22 3 of the whole married before 21 years. In England the number of minors marrying prior to 1866 declined to 13.3 per cent. in 1841.

Diagram of Births in Ontario from 1884-1894, showing the mean, and the increase or decrease for each year.

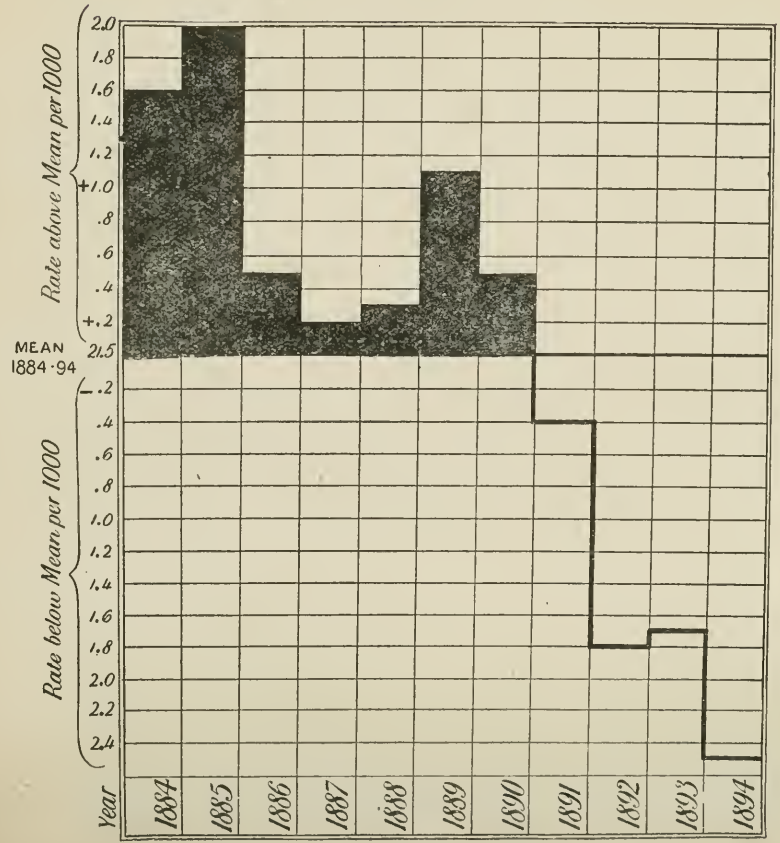
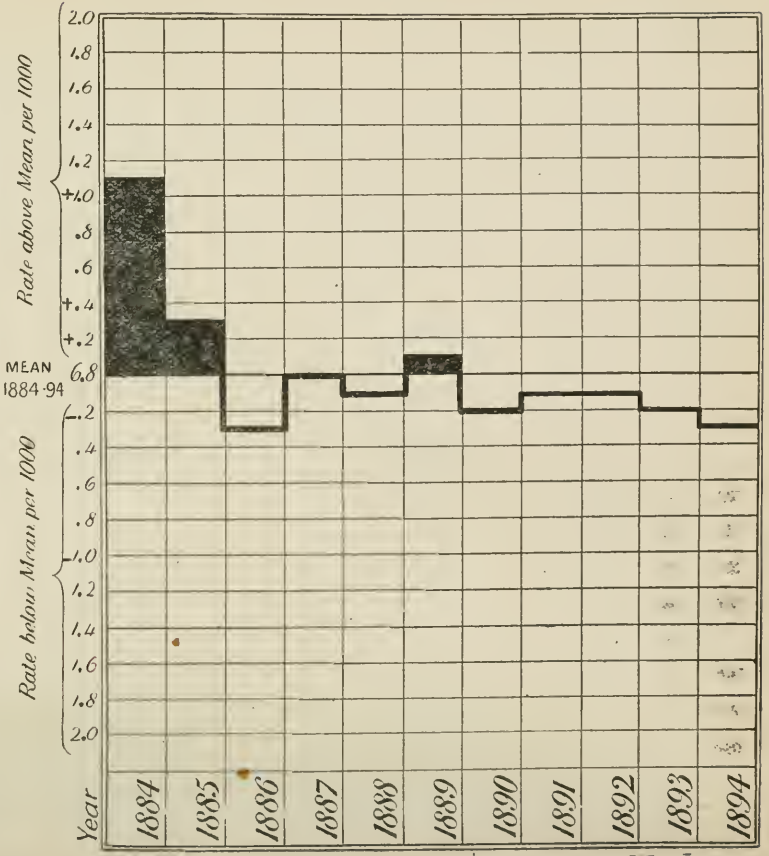


Diagram of Marriages in Ontario from 1884-1894, showing the mean, and the increase or decrease for each year.



It is apparent then from these several comparisons of ages that in no way can the female population, owing to age at marriage, be considered less fecund than in England. Dr. Farr (England) states that nearly half the children born in England are of parents under 30 years of age. According to Toronto statistics 335 out of 361 children, or 92.8 per cent. born, were from mothers under 30 years of age. Dr. Newsholme, referring to English statistics, states that if no woman married before 30 the births would be reduced to two-thirds of their present number, and if the marriage age were postponed to 35 the births would fall to one-third of their present number. Fortunately the great bulk of marriages of women in Toronto takes place before 30 years, otherwise the child population would rapidly disappear, since while the marriages after 30 were 12.1 per cent. of the whole marriages, the births were only 6.3 per cent. of the whole births.*

Taking the figures we have studied it seems apparent that if we take the proportion of births to marriages in the 30 to 35 year and subsequent periods, the fecundity of the females is distinctly lower in Toronto than in England. It has been shown also that the marriage rate for the Province as a whole is distinctly lower; and applying suggested corrections for imperfect returns can in no way explain the fact that of 143 marriages between 30 to 45 years only 23 births are recorded, or 2.4 per cent. for each year of the fifteen.

Assuming that the distribution of the population of Ontario during the several age periods approximates that in Massachusetts in 1885, we will see by the following table that inasmuch as the population between the ages of 15-45 is relatively higher than in England, owing to the lower mortality during the early age periods, that there should be not only more marriages but also more births in a city such as Toronto.

Thus we have, according to the tables of Dr. Newsholme for England and Dr. Abbott for Massachusetts, the following number of persons living in England and Massachusetts, at the several age periods per 1,000,000 inhabitants:

Age periods.	England.	Massachusetts.
15-20	100,000	110,000
20-25	91,000	101,000
25-30	81,000	96,000
30-35	70,000	76,000
35-40	62,000	70,000
40-45	55,000	61,000

From every standpoint, therefore, from which we examine the marriage and birth returns of the population of Toronto there seems to be but one conclusion which is that the marriage rate is for such a population abnormally low and that the birth-rate in relation to those marriages which take place is proportionately still lower.

* M. Joseph Korosi states that of every 100 marriages in Buda-pest in the several age periods, the fertility is as follows: 15-20, 35 per cent.; 20-25, 32 per cent.; 30-35, 24 per cent.; 35-40, 17 per cent., and at 40 years scarcely 7 per cent.

Marriages.

The total number of marriages recorded in Ontario in 1894, as seen in tables 12 and 13 of the report, was 14,341, or 28,682 persons. This is a rate of 6.5 per 1,000, and a total decrease of 134, as compared with 1893. This decrease has taken place in the counties as distinct from the cities, there being an increase in the latter of 171. Subtracting Chatham, which has been added to the cities, in 1894 there was a total increase in cities of 40. As regards the districts in which the greatest decrease occurred, the county of Lambton shows a decrease of 110, and York 97. This latter decrease took place almost wholly in the City of Toronto, which shows a decrease of 95. Other cities showing a decrease are London, with 24, Kingston, 48, St. Catharines, 41, and Brantford, 8. On the other hand, Ottawa shows an increase of 218, Belleville, 60, Hamilton, 37, and Windsor, 50. The total marriages in Windsor were 551, or 51.7 per 1,000. This steady and abnormal increase in the number of marriages in Windsor is seen in the following table:

1890 ..... 47.7 per 1,000.	1893 ..... 47.5 per 1,000.
1891 ..... 48.2 "	1894 ..... 51.7 "
1892 ..... 51.9 "	

The causes therefor have been referred to in previous reports, but its proximity to Detroit, a large city, famous for the number of its divorces, may play some part in the explanation.

With regard to the marriage rate, the general tendency toward a decrease is illustrated in the following tables of marriages during the past ten years:

Marriages in Ontario, 1884 1894.

1884	7.9	1890	6.6
1885	7.1	1891	6.7
1886	6.5	1892	6.7
1887	6.8	1893	6.6
1888	6.7	1894	6.5
1889	6.9		

A comparison in the number of marriages in Ontario with those of the New England States, with a population and climate so similar to Ontario, is given in the following table:

Marriage Rate in New England States in 1892.

Maine	8.63	Rhode Island	9.63
New Hampshire	10.64	Connecticut	8.32
Vermont	8.74	Ontario	6.5
Massachusetts	9.50	England	7.7

Means in 55 years in England ..... 8.05 per 1,000.

The difference between the marriage rate in these States, compared with that in Ontario, is most notable. Reference has been made in past reports to the stationary character of our population as regards immigration, but in order to make a true comparison with, at any rate, Massachusetts, the influence on the marriage rate of the large number of young French Canadians employed in the mills of that State must be understood.

The following table shows what the increase of population in that State means:

Table showing proportion of Native to Foreign-born Persons Married in Massachusetts.

Year.	Native-born.	Foreign-born.
1884	62.76	37.24
1885	63.34	36.66
1886	62.65	37.35
1887	60.41	39 58
1888	59.70	40.30
1889	59.06	40.94
1890	58.11	41.89

There is, however, another most potent influence affecting the marriage rate in these States. This is the number of divorces as seen in the following table:

Table of the Divorces in New England States in 1892.

State.	Number.	Per cent. of total marriages.
Maine	552	9.2
Massachusetts	790	3.5
New Hampshire	347	8.5
Rhode Island	296	8.4
Vermont	167	5 7
Connecticut	501	7.6
Total	2,653	7.13

This in a population of 4,886,405 means .5 in every 1,000 or one divorce in every 18.54 marriages, or 5.8 per cent. of the total number of marriages. The rate per 1,000 of marriages in these States as corrected, after subtracting the divorces, would therefore be 8.74, since it is found that a very considerable percentage of divorced persons have married again.

Thus we see that in New Hampshire, Rhode Island and Connecticut there were in 1892:

Number of divorces	1,144
Divorced persons who married again	623

This means 54.4 per cent. of all divorced persons have married again, and thus the comparison with Ontario can only be made after making this correction.

The total number of divorces in Ontario amounted in ten years to 22, or 2.2 per year, distributed as seen in the following table:

Divorces in Ontario, 1884-1894.

1884	1	1889	3
1885	4	1890	1
1886	1	1891	4
1887	2	1892	1
1888	2	1893	3

If a comparison of the three above States, giving the total number of divorced persons who have married again, be made with the total marriages in the same States, we find the following facts—1st, the rate of marriages is 9.59 per 1,000; 2nd, that the total divorces therein give a percentage of 8.16 of the total marriages; 3rd, that 54.4 per cent. of divorced persons have married again during the year, or that for every 25 persons married in a year one person has been married twice.

It is evident that the marriage rate in these States, when their position as regards an old settled population is remembered, is manifestly abnormally high, and there can be no doubt that the readiness with which divorces can be obtained therein, is one chief reason why so many persons go to these States to be married.

It is of interest to notice in connection with the abnormally high marriage rate in these states, the relation thereof to the birth-rate.

Thus we have of births in 1892:

New Hampshire	19.1 per 1,000
Rhode Island	24.5 " "
Connecticut	24.5 " "

The ratio between marriages and births in these States is thus:—9.59 marriages; births, 22.7 or 1 to 2.36; while in Ontario we have 6.5 marriages, births, 19.2; or 1 to 2.95.

In other words, the birth-rate for all in Ontario is exactly 25 per cent. higher than the average of these three States.

Months.—The remarks made in recent reports with regard to the quarterly percentage of marriages celebrated, may again be repeated as regards 1894. The greatest number occurred in the quarter ending in December 31st. The quarter ending in June comes next, then the quarter ending in March, and the smallest number in the third quarter. December as usual has the highest number of marriages while May has the smallest, instead of August as in 1893.

Denominations.—The order of marriages by denominations shows no change from that in preceding years.

Deaths.

The total deaths for 1894 in Ontario as seen in table 1 of the report, were 22,538, being less than in 1893 by 365. This means on the basis of population adopted in this report, a death-rate of 10.3 per 1,000.

It is gratifying to note, that not only is the relative death-rate lower than in 1893, but that the absolute lives saved to the Province is 365. While remembering that the returns are still in some degree imperfect, it must be admitted that the results show a relatively high degree of healthfulness in the population of Ontario.

This is seen by the comparison made in the following table:

Tables.—33 large towns (England)	1894	18.1
London,	1894	17.8
Liverpool	"	23.8
Birmingham	"	18.2
Manchester	"	20.4
Leeds	"	17.9
Bradford	"	17.0

In tables 3, 4, 5, will be found a recapitulation of the causes of deaths by classes.

Summarized for the whole Province, they are as follows:

Table showing Increase or Decrease of Deaths by Classes in Ontario.

Class of Disease.	1892.	1893.	1894.	I = Increase. D = Decrease.
Zymotic Diseases	4,670	4,116	4,629	I = 313
Constitutional Diseases	4,711	4,693	4,769	I = 76
Local "	8,211	8,394	7,978	D = 416
Developmental "	3,921	4,366	4,188	D = 178
Violent Deaths	845	769	783	I = 14
Cause not specified	762	565	391	D = 174
Total	23,120	22,903	22,538	D = 365

The table illustrates the fact of there being in 1894, an increase of the total contagious diseases in the Province, but that the number is still 241 below that of 1892. There is, moreover, a notable increase in the number of deaths falling under the group of "Local Diseases," and a decrease of nearly one-third in the class of "Cause not Specified." It is gratifying to notice that increasing precision of diagnosis, is characterizing the returns from physicians. This remark has been made in the several reports of the last several years.

Cities.—The deaths in the 13 cities of Ontario in 1894, show a decrease of 592 from that in 1893. Remembering that it is in the cities that the greatest increase of population occurs, that in cities there is the greatest number of births per 1,000, owing to a proportionately large number of persons at child-bearing ages, this decrease as an evidence of municipal sanitary improvement is most gratifying.

Table shewing Increase or Decrease of Deaths by Classes in Cities.

Class of Diseases.	1892.	1893.	1894.	I = Increase. D = Decrease.
Zymotic Diseases	1,580	1,453	1,274	D = 179
Constitutional Diseases	1,445	1,450	1,417	D = 33
Local "	2,578	2,702	2,375	D = 327
Developmental "	1,039	1,160	1,147	D 13
Violent Deaths	205	196	192	D = 4
Cause not specified	103	81	45	D = 36
Total	6,950	7,042	6,450	D = 592

It is further gratifying to note what with a total increase of 313 from zymotic diseases in the Province, there is a decrease in cities amounting to 179.

By consulting the returns for the several cities in the general tables, those cities wherein the falling off occurred will be seen to be Toronto with 278 less, London 33, Kingston 6, St. Thomas 8, Belleville 18, and Windsor 13.

Tuberculosis.—The total deaths from tuberculosis have decreased slightly from 1.8 in 1893 to 1.58 per 1,000 in 1894.

The several centres of prevalence in our city group still show their relatively high rate; but in several cities it is probable that the existence of general hospitals in these centres adds something to their actual rate owing to persons resident elsewhere dying in them. The illustrations of the relative prevalence of this disease in different geographical areas of the Province, as set forth in the report for 1893, may be seen by examination of the several tables to have been maintained in 1894.

Diphtheria and Croup.—The total deaths in the Province from this disease in 1894, were 1,075, or 133 more than in 1893. While practically the same rate, if we allow for the increase in population, the total rate per 1,000 is only .49 for 1894. This is higher than in England, which had in 1893 only .32 per 1,000, but lower than Massachusetts, which had in 1893 .57 per 1,000.

The falling off seen in cities of deaths from tuberculosis is similarly seen in the deaths from diphtheria. Thus there were in 1892, 513 deaths; in 1893, 418 deaths, and in 1894, 380 deaths. This showing is very remarkable and illustrates the steady growth of the public health measures of isolation and disinfection. If from the list the city of Ottawa with a total of 124 be excluded, the death-rate from this disease in 12 cities would be only 0.6 per 1,000, in a population of 379,628 in our cities.

While higher than in Great Britain, it is still gratifying to know that it means an almost uninterrupted decrease in the deaths from this disease in the cities of Ontario.

Deaths from Diphtheria and Croup, European Cities, 1893.

Cities.	Ratio per 1,000 of population.
London	.76
Paris	.52
Brussels	.04
St. Petersburg	.26
Berlin	.92
Rome	.27
Vienna	1.14
New York	1.05
Liverpool	.12
Birmingham	.13

Typhoid Fever.—It is satisfactory to know that deaths from this disease have almost steadily decreased during recent years. There can be no doubt that in addition to the improved sanitation of our rural districts, this must be directly traced to the yearly increasing number of towns and cities, establishing public water works.

We have now in Ontario public water supplies established as follows:

Total cities in Ontario	13	Public water supplies	13
" town and villages	110	" " "	62
Sewerage systems, in cities		" " "	12
" " towns and villages		" " "	20

Scarlatina (*Scarlet Fever*).—This disease, which as before mentioned, has been present only in a limited degree during the last ten years, had, as remarked in last year's report, begun to show a renewed activity. There have been 454 deaths in 1894 or .21 per 1,000. Relatively it is lower than Massachusetts, which had 810 in 1893, or .33 per 1,000.

This disease, owing to some cause, does not tend to have the same mortality on this continent that it has in England. Thus:

Scarlet Fever in England, 1893.

Number of Deaths.	Ratio to 1,000 of Population.
6,982	.23
Mean ten years, 1882 to 1892	.26
London	.37

Influenza.—The recrudescence of this disease in 1890 and in 1892, in all parts of the world, again shows in 1894, an increase over the previous year.

The deaths from it in Ontario since 1892 are:

1892	927
1893	483
1894	613

Its characteristics as a disease, especially affecting the innervation of the heart, have been remarked upon by all practising physicians, and hence its serious influence on the death-rate is especially seen in the increase of deaths notably in adult life. Being therefore in its immediate effects, a disease of the nerve centres, we must unfortunately expect to find it persist so long as its distinctly infectious character is not fully recognized, adding very materially to the annual mortality where diseases of the nervous system are increasing, owing to the high pressure rate of living, as seen in our cities, being maintained.

Amendments to the Act

The following extract from the Report for 1893, corrected for 1894, may properly conclude this report:

"The study which has been made in the preceding pages of the various returns for births, marriages and deaths again brings into prominence certain defects in the matter of complete returns, which have been specially referred to in the annual report for several past years. The remedies which have been deemed desirable for some of these defects have likewise been pointed out, and the urgent necessity for them makes itself daily manifest in the imperfect results of searches in the records for births, or deaths occurring in years past, and upon the evidence of which the material interests of many persons often depend.

"Thus there were issued in the past four years the following number of certificates:

——	1892.	1893.	1894.	1895.
Births	85	98	103	133
Marriages	38	46	48	69
Deaths	148	200	183	163
	371	344	334	365

"In addition to those applications for which certificates were issued from letters on file requesting that search be made and certificates issued, there were 127 letters in 1894, and in 1895, 138; but a very considerable addition to this must be made of applications made personally, by telephone from legal firms in Toronto, and occasionally by telegrams in urgent law cases.

"While the unsuccessful searches in a good number of instances are for records of births, marriages and deaths, which occurred before the Registration Act came into force, yet many were applications for certificates within this period (1869) which could not be granted in the absence of any record. Taking all together probably not much less than 1,000 applications were made in 1895, and with years the demand will become greater as more questions of heirship to property arise.

"In the report of the Inspector, Col. R. B. Hamilton, included in this report, the condition of the returns is commented upon, and he has again pointed out the direction in which improvements in registration are demanded and has presented recommendations with a view to this end. Summing up the recommendations made in previous reports, they include principally:

"1. Certain amendments by which the duties of division registrars, under certain conditions, are made more plain.

"2. A clause to prevent burials by undertakers or others without certificates of a medical health officer, or a coroner.

"3. The supplying of an index book for the use of division registrars, whereby a local record of births, marriages and deaths may be kept.

"4. The increase of the fee for registration to an amount sufficient to recompense the division registrar for obtaining complete records of births, marriages and deaths.

"Other minor improvements might with advantage be made, notably that by which the division registrars cannot be deprived of their fees, by any prior agreement for commuting the amount of any fees which they would receive for services performed under the provisions of the Act relating to births, marriages and deaths.

"Trusting that these recommendations, the need for which becomes, year by year, more urgent, if completeness of returns is to be approximated, may receive your early consideration.

"I have the honor to be,

"Your obedient servant,

"PETER H. BRYCE,

"Deputy Registrar General."

REPORT OF THE INSPECTOR.

Toronto, January 2nd, 1896.

To the Hon. Richard Harcourt,
Registrar-General of Ontario.

Sir,—I have the honor to report that during the past year I visited, for purposes of inspection, 107 division registrars within the following counties, viz. :—

Algoma,	Grey,	Middlesex,	Prescott and Russell,
Carleton,	Hastings,	Muskoka,	Simcoe,
Dufferin,	Lanark,	Northumberland	Victoria,
Elgin,	Leeds and Grenville,	and Durham,	Waterloo,
Essex,	Lennox and Addington,	Ontario,	Welland,
Frontenac,	Lincoln,	Peterboro',	York.

I find that with very few exceptions none of these officials keep a duplicate copy of the returns of births, marriages and deaths sent to this office, but they are almost unanimous in the opinion that it would be much more satisfactory if a book were provided for that purpose. As this question has been brought before the Legislature, I deemed it my duty to get an opinion on the subject, from as many division registrars as possible, and I find that although a few take very strong ground against being compelled to do "extra work," the large majority consider it would be an advantage to the municipality, if a copy of the returns could be seen within their own borders.

I certainly consider it is of vital importance that a book should be kept for each division registrar, but I would not recommend the adoption of this, unless at the same time the fee for registration be increased. This latter is of absolute necessity, if it is desired that anything like correct returns be made. As I have before pointed out, the present fee is ridiculously small and it cannot be expected that any good results can be obtained so long as the officials can justly complain that they are so inadequately paid.

I have now visited all sections of the Province, and find that the difficulties of securing full returns are much the same in the several localities. These difficulties have been fully dealt with in previous reports, so it is unnecessary to repeat them here, but I will briefly summarize what I consider the best means to be adopted to make the returns at all reliable, in the hope that the Department will take up the matter during the coming session.

(1) The fee for registration should be increased.

(2) The amount due each division registrar by a municipality, as shown by certificate from the Registrar-General, should be a lien upon said municipality until paid, and no mutual agreement for commutation should be considered legally binding upon the division registrar.

(3) No certificate for payment of these fees should be issued by the Registrar-General until he is satisfied that every return has been made as complete as under the circumstances may be possible.

(4) Each division registrar should be supplied with properly ruled books, in which to keep duplicate entry of each birth, marriage or death received by him.

(5) The duties and powers of division registrars should be more clearly laid down than they are at present.

(6) Prosecutions should be made by the Department. The division registrar should be relieved from this duty, but be compelled to send names of delinquents to the Inspector.

(7) The medical profession should be given clearly to understand that there are certain duties in connection with the Registration Act which they are called upon to perform.

(8) Steps should be taken by means of notices in the local papers, posters, etc , to let citizens know that several changes have been made in the Registration Act, and that all the provisions of the said Act are going to be strictly carried out. Probably the most effective way of doing this would be to institute a series of prosecutions in different sections of the Province.

In considering changes in, or amendments to the Registration Act, there are many other matters of detail, some of which have been pointed out in previous reports, which will come up for consideration, but in this report I have endeavored to summarize as briefly as possible what I consider absolutely necessary to be done if the returns of births, marriages and deaths are to be considered of any importance whatever.

For many years the provisions of the Act have been defective. I trust that during the coming session improvements will be made by which it will become of much greater value to the Province.

I have the honor to be, Sir,

Your obedient servant,

R. B. HAMILTON,

Inspector.

TABLE 1.

Table showing the total number of Births, Marriages and Deaths in each County in 1894.

Counties.	Population.	Births.			Marriages.			Deaths.			Totals.			Ratio to 1,000 of the population.		
		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Births.	Marriages.	Deaths.
			Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.			
Algoma	45,361	1,065	.....	122	321	12	.....	493	84	.....	1,879	.....	26	23.5	7.1	10.9
Brant	37,585	642	.....	39	236	.....	15	393	.....	30	1,271	.....	74	17.1	6.3	10.4
Bruce	66,625	1,300	.....	40	398	33	.. .	582	33	.....	2,280	16	.....	19.5	5.9	8.7
Carleton	80,059	1,429	.....	267	608	44	.....	1,359	126	.....	3,396	.....	97	17.8	8.6	16.9
Dufferin	22,939	397	.....	60	140	.....	3	167	.....	37	704	.....	100	17.3	6.1	7.3
Elgin	44,733	796	50	.. ..	281	.....	36	379	.....	62	1,456	.....	48	17.8	6.3	8.5
Essex	57,283	1,442	.....	129	854	45	.....	664	.....	15	2,960	.....	99	25.1	14.9	11.6
Frontenac	48,481	804	.....	221	230	... ..	76	539	.....	60	1,573	.....	357	16.5	4.7	11.1
Grey	73,443	1,355	2	.....	466	50	.....	572	10	.....	2 393	62	.....	18.4	6.3	7.8
Haldimand	24,172	399	13	.....	158	14	... .	229	69	....	786	96	.....	16.5	6 5	9.5
Halton	22,668	395	.....	38	114	1	.....	198	.....	5	707	.....	42	17.4	5.0	8.7
Haliburton	6,545	161	13	.....	37	7	... ..	54	.....	1	252	19	.....	24.6	5.6	8.2
Hastings	60,933	1,050	.....	59	396	17	.... .	482	.....	62	1,928	.....	104	17.2	6.5	7.9
Huron	68,870	1,143	.....	182	398	.....	19	513	.....	109	2,054	.....	310	16.6	5.7	7.4
Kent	60,535	1,137	98	.....	448	69	.... .	562	40	.....	2,147	207	.. ..	18.8	7.4	9 3
Lambton	56,643	1,097	.....	75	309	.....	110	454	.....	60	1,860	....	245	19.3	5.4	8.0

Lanark	38,905	623	5	.....	258	31	.....	346	54	.....	1,227	90	.....	16.0	6.6	8.9
Leeds and Grenville	62,792	799	64	.....	358	28	.....	410	.. ..	100	1,567	.....	8	12.7	5.8	6.5
Lennox and Addington	25,523	350	.....	16	171	7	.....	260	82	.....	781	73	.....	13.7	6.7	10.2
Lincoln	31,020	534	34	.....	176	.....	39	404	53	.....	1,114	48	.....	17.2	5.7	13.0
Middlesex	105,169	1,601	.. ...	20	586	.....	60	1,056	.....	4	3,243	.....	84	15.2	5.6	10.0
Muskoka and Parry Sound	54,033	1,409	326	.....	348	91	.....	396	20	.....	2,153	437	... .	26.1	6.4	7.3
Norfolk	31,960	582	7	.....	209	.....	22	260	1	.....	1,051	.....	14	18.2	6.6	8.1
Northumberland and Durham	72,667	1,115	.....	45	402	35	.....	769	69	.....	2,286	59	.....	15.3	5.5	10.5
Ontario	46,774	873	13	.....	229	.....	45	470	.... .	8	1,572	.....	40	18 6	4 9	10.0
Oxford	51,407	1,042	32	.....	298	.....	60	564	8	.....	1,904	.....	20	20.2	5.8	10.9
Peel.	25,647	425	.....	28	134	10	.....	201	.....	1	760	.....	19	16 5	5.2	7.8
Perth	53,334	929	.....	85	339	21	.....	479	51	.....	1,747	.....	13	17.4	6.3	8.9
Peterborough	36,412	836	60	.....	200	.....	45	460	70	.....	1,496	85	.....	22.9	5.4	12.6
Prescott and Russell	43,790	1,276	....	57	327	63	....	653	35	.....	2,256	141	.....	29.1	7 4	14.9
Prince Edward	19,477	327	5	.....	155	11	.....	249	25	....	731	41	.....	16.8	7.9	12.8
Renfrew	47,388	1,239	.....	26	335	.....	28	504	50	.....	2,078	.....	4	26.1	7.1	10.6
Simcoe	73,972	1,493	21	... .	492	.....	52	689	87	.....	2,674	56	.....	20.2	6.6	9.3
Stormont, Dundas and Glengarry	71,918	983	.....	106	385	.....	16	529	.....	94	1,897	.....	216	13 6	5.3	7.3
Victoria.	34,021	682	41	.....	201	.....	43	330	.....	7	1,213	.....	9	20 0	5.9	9.7
Waterloo	52,037	1,189	.....	78	359	.....	42	518	9	.....	2,066	.....	111	22.8	6.9	9.9
Welland	31,588	677	67	.....	237	.....	9	301	....	46	1,215	12	.....	21.4	7.5	9 5
Wellington	61,295	1,203	.....	22	370	33	....	633	38	....	2,206	49	....	19.6	6.0	10.3
Wentworth	81,317	1,598	.....	74	596	61	...	1,019	.....	36	3,213	.....	49	19.6	7.3	12.5
York	259,795	5,654	95	....	1,782	.....	97	3,398	.....	742	10,834	.. ..	744	21.7	6.8	13.1
Total	2,189,116	42,051	946	1,789	14,341	683	817	22,538	1,014	1,379	78,930	1,491	2,833	19.2	6.5	10.3

TABLE 2.

Table showing the total number of Births, Marriages and Deaths in each Town in 1894.

Towns.	Population.	Births.			Marriages.			Deaths.			Totals			Ratio to 1,000 of the population.		
		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Births.	Marriages.	Deaths.
			Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.			
Almonte	3,159	75	....	...	26	....	....	29	.....	...	.....	.....	.....	23.7	8.2	9.2
Barrie	5,732	78	.....	.....	63	.....	.....	77	.....	.....	.....	....	.....	13.6	11.0	13.4
Berlin	7,656	206	.....	.....	90	.....	.....	81	.....	.....	.....	....	.....	26.9	11.7	10.6
Brampton	3,352	46	.....	.....	22	.....	.....	23	.....	.....	.....	.....	.....	13.7	6.5	6.8
Brockville	9,063	130	.....	.....	78	.....	.....	119	.....	.....	.....	.....	.....	14.3	8.6	13.1
Carleton Place	4,568	95	.....	.....	34	.....	.....	28	.....	....	.....	.....	.....	20.8	7.4	6.1
Cobourg	4,968	107	....	.....	27	.....	...	64	.....	.....	.....	.....	.....	21.5	5.4	12.8
Collingwood	5,091	129	.....	.....	40	.....	.. ..	51	.....	.....	.....	.....	.....	25.3	7.8	10.0
Cornwall	7,016	146	.....	.....	56	.....	.....	96	.....	.....	.....	.....	.....	20.8	8.0	13.6
Deseronto	3,438	77	.....	.....	17	.....	.....	34	.....	.....	.....	.....	.....	22.4	4.9	9.9
Fort William	3,400	100	.....	.....	29	.....	.....	38	.....	.....	.....	.....	.....	29.4	8.5	11.2
Gananoque	3,779	73	.....	.....	22	.....	.....	25	.....	.....	.....	.....	.....	19.3	5.8	6 6
Galt	7,769	147	.....	.....	56	.....	.....	112	.....	.....	.....	.....	.. ..	18.9	7.2	14.4
Georgetown	1,554	22	.....	....	10	.....	.....	14	.....	.....	.....	.....	....	14.1	6.4	9.0
Goderich	3,957	41	.....	.....	27	.....	... ..	16	.....	.....	.....	.....	.....	10.3	6.8	4.0
Ingersoll	4,316	101	.....	.....	36	.....	.. ..	64	.....	.....	.....	.....	.....	23.4	8.3	14.8

Lindsay	6,270	148			78			73						23.6	12.4	11.6
London, West	1,972	37			10			16						18.8	5.1	8.1
Napanee	3,609	69			52			69						19.1	14.4	19.1
Newmarket	2,206	45			35			17						20.4	15.8	7.7
Niagara Falls	3,448	102			60			37						29.5	17.4	10.7
Orangeville	3,050	41			23			31						13.4	7.5	10.1
Owen Sound	7,729	158			80			91						20.4	10.3	11.8
Paris	3,124	65			45			39						20.8	14.4	12.5
Picton	3,388	46			57			60						13.6	16.8	17.7
Pembroke	4,537	163			40			84						35.9	8.8	18.5
Peterborough	10,216	288			75			168						28.2	7.3	16.4
Port Arthur	2,780	59			40			51						21.2	14.3	18.3
Port Hope	5,198	74			29			52						14.2	5.6	10.0
Portsmouth	2,031	14						46						6.9		22.6
Prescott	3,006	35			42			17						11.6	13.9	5.6
Rat Portage	2,287	93			23			55						40.6	10.0	24.0
Sarnia	6,689	146			74			48						21.8	11.1	7.2
Sault Ste. Marie	2,534	82			44			18						32.4	17.3	7.1
Tilsonburg	2,227	50			31			32						22.4	13.9	14.3
Toronto Junction	5,000	140			32			56						28.0	6.4	11.2
Walkerton	3,151	61			20			37						19.3	6.3	11.7
Waterloo	3,028	65			12			22						21.4	3.9	7.2
Welland	2,095	43			20			24						20.5	9.5	11.4
Woodstock	8,880	179			76			123						20.0	8.5	13.8
Total	177,273	3,776			1,531			2,137						21.8	8.6	12.6

TABLE 3.

Table showing the total number of Births, Marriages and Deaths in each City in 1894.

Cities.	Population.	Births.			Marriages			Deaths.			Totals.			Ratio to 1,000 of the population.		
		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Number in 1894.	Variation from 1893.		Births.	Marriages.	Deaths.
			Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.			
Toronto	192,118	4,201	48	.....	1,456	.....	95	2,778	.....	699	8,435	.....	746	21.9	7.6	14.5
Hamilton	50,512	1,028	.....	81	456	37	.....	666	.....	30	2,150	.....	75	20.3	9.0	13.2
Ottawa	45,535	864	.....	225	402	218	.....	1,066	132	.....	2,332	130	.....	18.9	8.8	23.4
London	32,976	573	.. ..	31	284	.....	24	466	.....	.....	1,323	.....	56	17.4	8.5	14.1
Kingston	19,864	297	.....	126	114	.. ..	48	281	.....	50	692	.....	224	14.9	5.7	14.1
Brantford	13,150	314	.....	35	122	.....	8	208	.....	26	644	.....	69	23.9	9.3	15.8
St. Thomas	10,688	228	.....	12	108	12	.....	120	.....	21	456	19	.....	21.3	10.1	11.2
Guelph	10,865	240	.....	9	78	.....	6	143	3	.....	461	.....	12	22.1	7.2	13.1
St. Catharines	9,455	152	26	.....	59	.....	41	162	5	.....	373	.....	10	16.1	6.2	17.1
Belleville	10,225	142	.....	4	125	60	....	113	.....	45	380	11	... ..	13.9	12 2	11.0
Stratford	9,797	178	2	.....	80	5	.....	130	15	.....	388	22	.....	18.2	8.2	13.3
Windsor	10,644	256	.....	47	551	50	.....	170	.....	23	977	.....	20	24.1	51.7	15.9
Chatham	9,334	161	14	.....	131	11	.....	147	13	.....	439	38	.....	17.2	15.1	15.7
Total	425,163	8,634	90	570	3,966	393	222	6,450	168	894	19,050	220	1,212	20.3	9.3	15.2

TABLE 4.

Table showing Twelve Highest Causes of Deaths by Counties in the Province for two years, 1893, 1894.

Year.	Phthisis.		Old age.		Pre-natal period.		Pneumonia.		Diphtheria.		Valvular diseases.		Paralysis.		Cholera infantum.		Wounds and accidents.		Bronchitis.		Convulsions.		Influenza.	
	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.
1893	2,552	1.2	2,306	1.0	1,840	.8	1,595	.7	942	.4	863	.4	807	.4	637	.3	618	.3	587	.3	585	.3	483	.2

TABLE 4—*Concluded.*

Year.	Phthisis.		Old age.		Pre-natal period.		Pneumonia.		Diphtheria.		Paralysis.		Valvular diseases.		Influenza.		Cholera infantum.		Convulsions.		Bronchitis.		Scarlet fever.	
	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.	Number of deaths.	Ratio to population.
1894.....	2,379	1.08	2,008	.9	1,839	.8	1,487	.6	1,075	.5	774	.4	718	.4	613	.3	605	.3	505	.2	483	.2	454	.2

TABLE

Recapitulation by Classes of

Cause of death.	Sex.			Nativity.			Social condition.			Ages.					
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.
Zymotic diseases	2230	2198	1	3757	591	81	3228	392	809	1213	1105	574	207	114	120
Constitutional diseases	2203	2563	3	3399	1251	119	1345	1115	2309	532	187	84	104	277	410
Local diseases	4234	3743	1	5020	2736	222	2833	1565	3580	1282	735	278	214	223	242
Developmental diseases	2122	2033	33	2448	1661	79	1888	893	1407	1849	....	....	....	6	36
Violent deaths	639	143	1	515	227	41	214	49	520	12	62	47	50	62	89
Cause not specified	193	194	4	300	62	29	177	60	154	60	61	26	10	9	13
Total	**11621**	**10874**	**43**	**15439**	**6528**	**571**	**9685**	**4074**	**8779**	**4948**	**2150**	**1009**	**585**	**691**	**910**

TABLE

Recapitulation by Classes of

Cause of death.	Sex.			Nativity.			Social condition.			Ages.					
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.
Zymotic diseases	643	630	1	1143	112	19	1053	54	167	449	361	181	41	22	27
Constitutional diseases	663	754	....	940	435	42	477	236	704	225	61	30	36	71	134
Local diseases	1274	1100	1	1424	875	76	965	326	1084	473	263	94	64	63	71
Developmental diseases	577	545	25	832	300	15	759	129	259	753	....	....	....	1	8
Violent deaths	158	34	....	116	67	9	53	13	126	2	10	18	13	24	14
Cause not specified	19	25	1	25	11	9	12	6	27	2	3	6	....	....	1
Total	**3334**	**3088**	**28**	**4480**	**1800**	**170**	**3319**	**764**	**2367**	**1904**	**698**	**329**	**154**	**181**	**255**

5.

Diseases by Counties, 1894.

Ages.								Months.												Total.
25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
97	147	99	104	175	260	167	47	523	338	300	285	247	235	386	529	512	364	312	398	4429
392	634	488	544	571	370	112	64	401	372	395	411	395	367	378	404	437	397	364	448	4769
239	509	559	760	1178	1185	450	124	823	711	849	818	724	576	478	565	590	590	528	726	7978
36	86	20	2	20	807	1305	21	412	334	414	359	347	305	293	317	350	309	338	410	4188
68	104	69	67	62	47	23	21	44	50	52	58	53	87	101	92	76	59	64	47	783
15	38	38	41	46	10	....	24	40	34	40	38	19	27	24	39	34	30	30	36	391
847	**1518**	**1273**	**1518**	**2052**	**2679**	**2057**	**301**	**2243**	**1839**	**2050**	**1969**	**1785**	**1597**	**1660**	**1946**	**1999**	**1749**	**1636**	**2065**	**22538**

6.

Diseases by Cities, 1894.

Ages.								Months.												Total.
25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
28	42	27	21	22	34	14	5	118	80	73	83	76	82	184	184	118	93	101	82	1274
115	194	138	174	132	76	18	13	124	97	110	106	112	113	125	133	151	120	98	128	1417
70	163	182	227	298	278	104	25	217	212	267	230	232	187	156	192	167	152	163	200	2375
3	15	4	....	....	151	212	....	110	78	114	84	103	91	86	92	85	93	108	103	1147
11	35	22	10	14	11	5	3	7	10	7	14	12	34	30	22	18	16	15	7	192
....	11	6	6	4	1	....	5	5	2	4	6	2	3	3	3	2	4	4	7	45
227	**460**	**379**	**438**	**470**	**551**	**353**	**51**	**581**	**479**	**575**	**523**	**537**	**510**	**584**	**626**	**541**	**478**	**489**	**527**	

TABLE

Recapitulation by Classes of

Cause of death.	Sex.			Nativity.			Social condition.			Ages.					
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.
Zymotic diseases	245	212	....	404	50	3	359	31	67	148	109	58	23	14	14
Constitutional diseases	208	238	....	318	116	12	138	115	193	48	11	8	9	38	47
Local diseases	410	360	....	493	260	17	301	166	303	137	82	32	20	20	23
Developmental diseases	175	173	3	195	151	5	166	85	100	157	....	....	....	1	4
Violent deaths	65	17	....	47	27	8	24	6	52	1	8	7	5	3	10
Cause not specified	20	10	1	27	3	1	13	3	15	8	5	....	....	1	1
Total	**1123**	**1010**	**4**	**1484**	**607**	**46**	**1001**	**406**	**730**	**499**	**215**	**105**	**57**	**77**	**99**

TABLE

Recapitulation by Classes of Diseases in the smaller Towns of the

Cause of death.	Sex.			Nativity.			Social condition.			Ages.					
	Male	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.
Zymotic diseases	156	192	....	299	46	3	264	29	55	93	100	45	20	7	9
Constitutional diseases	162	210	1	255	113	5	97	99	177	39	17	3	3	21	38
Local diseases	338	288	....	393	221	12	232	122	272	109	57	18	10	23	14
Developmental diseases	159	142	1	186	115	1	153	64	85	151	....	....	....	2	1
Violent deaths	44	12	....	42	12	2	18	2	36	1	4	5	6	4	5
Cause not stated	18	19	....	33	2	2	19	5	13	3	6	4	3	1	2
Total	**877**	**863**	**2**	**1208**	**509**	**25**	**783**	**321**	**638**	**396**	**184**	**75**	**42**	**58**	**69**

No. 7.

Diseases by Towns, 1894.

Ages.								Months.												Total.
25-30.	30-40.	40 50.	50 60.	60 70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
8	22	16	10	9	17	6	3	62	28	30	29	21	18	34	73	58	40	26	38	457
33	60	48	56	48	29	5	6	30	34	39	39	36	37	32	43	40	36	37	43	446
18	46	55	86	114	103	24	10	79	61	75	95	66	63	37	59	43	54	57	81	770
6	6	5	....	2	56	112	2	39	30	42	39	23	21	24	32	24	22	26	29	351
8	12	3	9	4	5	2	5	6	4	6	10	4	9	7	9	10	7	6	4	82
3	3	1	2	2	1	....	4	2	1	2	2	2	3	2	4	5	6	....	2	31
76	**149**	**128**	**163**	**179**	**211**	**149**	**30**	**218**	**158**	**191**	**214**	**152**	**151**	**136**	**220**	**180**	**165**	**152**	**197**	**2137**

7 (B).

Province not given in detail in Appendix but included in Table 5.

Ages.								Months.												Total.
25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
6	9	4	10	12	10	9	4	32	19	33	18	26	24	23	50	34	43	26	20	348
35	53	33	42	46	34	8	1	35	20	34	34	25	29	41	29	38	29	27	32	373
23	37	38	63	104	84	33	13	68	65	64	64	61	35	33	47	48	50	34	57	626
3	3	3	....	....	60	78	1	31	30	28	29	13	15	30	26	38	16	22	24	302
9	3	6	4	4	3	1	1	2	3	2	4	10	6	3	9	6	2	6	3	56
....	4	6	2	5	....	....	1	3	2	3	3	1	4	2	7	2	3	3	4	37
76	**109**	**90**	**121**	**171**	**201**	**129**	**21**	**171**	**139**	**164**	**152**	**136**	**113**	**132**	**168**	**166**	**143**	**118**	**140**	**1742**

TABLE 8.

Shewing the Death-rate per 1,000 of Population in each County of the Province for ten years.

Counties.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	Average rate per county for ten years.
Algoma	14.2	10.4	12.3	7.4	9.7	11.9	9.6	9.6	9.1	10.9	10.5
Brant	12.5	11.5	14.0	11.2	12 7	12.3	10.5	11.4	11.3	10.4	11.7
Bruce	7.5	7.1	8.3	7.7	7.4	7.1	8.3	8.3	8.3	8.7	7.8
Carleton	19.5	21.7	17.5	19.6	18.2	18.4	8.9	13.6	15.5	16.9	17.0
Dufferin	8.6	10.5	12.5	3.1	9.7	10.0	10.8	9.6	8.9	7.3	9.1
Elgin	8.7	8.0	9 7	11.4	9.2	9.9	9.2	9.1	9.9	8.5	9.3
Essex	14.4	14.8	14.4	15.8	12.1	12.4	12.0	12.2	11.9	11.6	13.1
Frontenac	13.1	12.0	12.8	10.2	15.9	15.7	13.7	14.5	12.4	11.1	13.1
Grey	7.6	7.4	8.1	7.6	7.0	7.3	7.4	7.7	7.7	7.8	7.5
Haldimand	9.4	8.2	8.8	10.0	8.5	6.7	8.2	10.3	6.6	9.5	8.6
Halton	10.8	10.0	.1	9.4	8.6	8.9	9.3	9.9	9.0	8.7	9.3
Haliburton				7.3			8.0	9.2	8.6	8.2	8.2
Hastings	11.3	8.1	11.0	10 7	10.7	10.6	8.3	8.9	9.0	7.9	9.6
Huron	7.9	7.0	8.0	7.5	7.3	7.4	8.2	8.5	9.1	7.4	7.8
Kent	9.7	8.8	10.0	9.0	8.6	8.3	8.4	8.7	8.7	9.3	8.9
Lambton	9.2	9.5	9.7	9.8	9.5	9.1	8.1	8.4	9.1	8.0	9.0
Lanark	9 0	10.0	9.8	9.2	8.4	8.9	6.6	7.4	7.6	8.9	8.6
Leeds and Grenville	11.6	10.0	8.0	8.9	8.2	8.8	7.1	7.2	8.2	6.5	8.4
Lennox and Addington	8.5	7.1	8.4	7.4	9.4	7.3	10.1	7.7	7.0	10.2	8.3
Lincoln	13.2	12.4	11.8	13.1	11.4	12.8	10.9	14.3	11.4	13.0	12.4
Middlesex	11.6	10.1	10.7	10.4	10.4	11.6	8.9	10.9	10.1	10.0	10.4
Muskoka and Parry Sound	11.9	10.1	11.4	10.0	9.1	10.2	5.8	7.3	7.0	7.3	9.0
Norfolk	8.8	8.9	7.1	8.7	7.3	8.1	8.5	9.5	8.2	8.1	8.2
Northumberland and Durham.	11.6	7.9	8.7	8.8	8.1	9.9	10.7	10.1	9.7	10.5	9.6
Ontario	10.2	8.8	9.7	10.0	9.3	9.4	9.8	11.0	10.3	10.0	9.8
Oxford	9.4	9.4	10.6	11.3	10.9	11.1	9.7	11.4	10.9	10.9	10.5
Peel	9 7	10.3	11.4	11.0	9.2	7.8	7.7	7.5	7.9	7.8	9.0
Perth	8.1	9.1	9.0	8.4	8.3	8.2	8.9	9.1	8.1	8.9	8.6
Peterborough	10.9	9.6	9.7	10.6	10.6	11.4	11.1	12.1	10.8	12.6	10.9
Prescott and Russell	16.7	15.1	14.9	13.1	14.3	14.3	10.6	12.9	11.7	14.9	13.8
Prince Edward	12.8	12.1	10.1	11.4	10.1	11.3	11.1	11.5	11.6	12.8	11.5

TABLE 8.—*Continued.*

Shewing the Death-rate per 1,000 of Population, in each County of the Province for ten years.

Counties.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892	1893.	1894.	Average rate per county for ten years.
Renfrew	9 2	9.5	8.5	8.2	8.8	7.2	7.7	9.5	9.6	10.6	8.9
Simcoe	8.2	7.1	7.9	8.0	8 0	6.4	8.1	8.1	8.2	9.3	7.9
Stormont, Dundas and Glengarry	9.2	8.1	8.1	5.5	8.8	9.2	8.5	7.9	8.8	7.3	8.1
Victoria	8.4	8.0	9 0	7.7	9.1	7.7	9.9	10.9	10.0	9.7	9.0
Waterloo	10.9	11.4	11.2	14.2	12.1	11.9	11.6	10.5	9.9	9.9	11.3
Welland	11.8	8.7	9 0	10.9	11.1	9.4	12.4	10.5	11.1	9.5	10.4
Wellington	9.7	9.6	9.6	9.1	10.0	9.2	10.1	10.6	9.8	10.3	9.8
Wentworth	16.3	16.6	16.3	15.8	15 1	14.4	13.2	11.7	13.1	12.5	14.5
York	19.5	21.3	20.2	19.3	19.0	16.3	15 9	16.4	16.1	13.1	17.7
Average rate	11.4	11.0	11.5	11 0	10.7	11.1	10.2	10.7	10.6	10.3	10.8

List of Towns included in Table 7 (B) showing total Deaths by Classification of Diseases.

	Town.		Town.
Weston,	"	Trenton,	"
Essex,	"	Dundas,	"
Meaford,	"	Port Dover,	"
Aylmer,	"	Bowmanville,	"
Dresden,	"	Whitby,	"
Bothwell,	"	Milton,	"
Smith's Falls,	"	North Toronto,	"
Norwich,	"	Richmond Hill,	"
Campbellford,	"	Aurora,	"
Port Perry,	"	East Toronto,	"
Forest,	"	Fergus,	"
Point Edward,	"	Bobcaygeon,	"
Uxbridge,	"	Morrisburg,	"
Mattawa,	"	Fenelon Falls,	"
Penetanguishene,	"	Arthur,	"
Orillia,	"	Harriston,	"
Dunnville,	"	Niagara Falls,	"
Ridgetown,	"	Preston,	"
Wallaceburg,	"	New Hamburg,	"
Perth,	"	Hespeler,	"
Strathroy,	"	St. Mary's,	"
Merritton,	"	Listowel,	"
Oshawa,	"	Lakefield,	"
Simcoe,	"	Kincardine,	"
Petrolia,	"	Wiarton,	"
Parry Sound,	"	Exeter,	"
Huntsville,	"	Seaforth,	"
Oakville,	"	Winghau.	"
Elora,	"	Clinton,	"
Palmerston,	"	Port Colborne,	"
Renfrew,	"	Mount Forest,	"
Arnprior,	"	Amherstburg,	"
Thorold,	"	Sandwich,	"
Mitchell,	"	Walkerville,	"
Ashburnham,	"	North Bay,	"
Rockland,	"	Sudbury,	"

TABLE 9.

Illegitimate Births, Twins and Triplets in the Province.

Illegitimate Births.		Ratio to 1,000 births.	Number of pairs of twins.	Number of cases of triplets.
No.	Proportion to whole number of Births.			
467	One to every 90 births.....	11.1	335	2

TABLE 10.

Births in the Province in 1894, shewing the proportion of Male to Female Births

Sex.	January.	February.	March.	April.	May.	June.	July.	August.	Septemb'r.	October.	Novemb'r.	Decemb'r.	Total.
Males	1,750	1,680	1,967	1,866	1,860	1,866	1,938	1,845	1,810	1,798	1,702	1,723	21,805
Females.....	1,575	1,565	1,838	1,822	1,780	1,630	1,754	1,733	1,698	1,651	1,544	1,656	20,246
Totals.....	3,325	3,245	3,805	3,688	3,640	3,496	3,692	3,578	3,508	3,449	3,246	3,379	42,051
Male births to 100 female births	111.1	107.3	107.0	102.4	104.5	114.0	110.4	106 4	106.6	108 8	110.2	104.0	107.7

TABLE 11.

Order of Births by Months in the Province.

Months.	Males.	Months.	Females.	Months.	Total Males and Females.
March	1,967	March	1,838	March	3,805
July	1,938	April	1,822	July	3,692
April	1,866	May	1,780	April	3,688
June	1,866	July	1,754	May	3,640
May	1,860	August.....	1,733	August	3,578
August	1,845	September	1,698	September	3,503
September.....	1,810	December	1,656	June	3,496
October	1,798	October	1,651	October	3,449
January	1,750	June.....	1,630	December	3,379
December	1,723	January	1,575	January.....	3,325
November	1,702	February	1,565	November	3,246
February	1,680	November	1,544	February	3,245
Total.....	21,805	Total	20,246	Total	42,051

TABLE 12.

Marriages by Months in the Province.

Months.	1893.	Months.	1894.	Quarters.	1893.	Quarters.	1894.
December	1,525	December .	1,542	Quarter ending Dec. 31.	4,205	Quarter ending Dec. 31.	4,370
June	1,387	October ...	1,539	" March 31.	3,531	" June 30.	3,409
November ...	1,353	September.	1,404	" June 30.	3,471	" Mar. 31.	3,351
October	1,327	June	1,370	" Sept. 30.	3,224	" Sept. 30.	3,203
September....	1,313	November.	1,289	No date given	44	No date given	8
January.....	1,248	January ..	1,247				
March.....	1,202	April.....	1,148				
April	1,161	March	1,112				
February	1,081	February..	992				
July	1,000	August....	906				
May	923	July	893				
August	911	May	891				
No date given.	44	No date given ...	8				
Total	14,475		14,341	Total	14,475	Total	14,341

TABLE 13.

Marriages by Denominations in the Province.

Denominations.	Number of persons married.	Per cent. of whole.	Proportion to the whole number of persons married.
Methodists	9,920	34.5	2.8
Presbyterians	6,193	21.5	4.6
Church of England	4,666	16.2	6.1
Roman Catholic	4,085	14.2	7.0
Baptists	1,631	5.7	17.5
Lutherans.....	639	2.3	42.9
Congregationalists	297	1.0	96.2
Evangelical Association	225	.8	127.5
Mennonites	142	.5	200.0
Quakers.....	9	.03	3,186.9
Other denominations.....	644	2.3	44.5
No denomination given.....	201	.7	142.7
Total	28,682	100.0	

TABLE 14.

Bridegrooms and Brides who were seventy years of age and over at the time of marriage.

Counties.	Occupation of bridegroom.	Age of bridegroom.	Age of bride.	Counties.	Occupation of bridegroom.	Age of bridegroom.	Age of bride.
Brant	Labourer	74	70	Lincoln	Farmer	75	77
Bruce	Farmer	73	44	"	Mechanic	77	76
"	Gentleman.	73	48	Middlesex	Mail carrier	76	60
Carleton	Farmer	76	60	"	Farmer	70	30
"	Farmer	70	49	Northumberland & Durham	Mariner	75	63
"	Farmer	74	43	Ontario	Cooper	70	55
"	Senator	80	62	"	Gentleman.	70	57
Elgin	Gentleman.	70	38	Oxford	Gentleman.	70	70
"	Gentleman.	78	70	"	Farmer	75	66
Essex	Farmer	63	74	"	Farmer	73	58
"	Expressm'n	59	73	Peterborough	Clerk	72	48
"	Merchant	72	66	Prince Edward	Farmer	72	49
"	Mechanic	70	40	"	Farmer	75	63
Frontenac	Farmer	73	45	Simcoe	Farmer	70	65
Grey	Farmer	73	45	Waterloo	Farmer	72	56
Halton	Shoemaker.	73	62	"	Farmer	78	68
Hastings	Farmer	76	41	Welland	Farmer	72	48
"	Carpenter	71	61	"	Farmer	70	50
"	Farmer	67	70	"	Farmer	75	68
"	Farmer	77	58	Wellington	Farmer	70	52
"	Farmer	74	76	Wentworth	Agent	70	62
"	Farmer	73	69	"	Hotel-k'pr	77	71
"	Engineer	74	49	"	Gentleman.	80	60
Huron	Gentleman.	72	35	"	Gardener	70	62
"	Gentleman.	75	53	"	Gentleman.	71	53
Leeds and Grenville	Labourer	73	48	York	Gentleman.	70	65

APPENDIX.

BIRTHS.

BIRTHS BY MONTHS IN 1894.—COUNTIES.

Counties.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of pairs of twins.	Triplets.	Illegitimate.	Still born.
Algoma:																	
Males	64	44	44	54	54	40	55	45	46	43	37	47	573	7	.....	2	3
Females	39	28	45	60	42	36	40	49	40	40	39	34	492	5	.....	2	2
Total	103	72	89	114	96	76	95	94	86	83	76	81	1,065	6 pair.	.....	4	5
Brant:																	
Males	28	21	36	15	26	33	26	23	37	23	21	28	317	7	.....	.....	1
Females	29	31	27	32	23	25	29	24	34	21	21	29	325	11	.....	.....	3
Total	57	52	63	47	49	58	55	47	71	44	42	57	642	9 pair.	.....	.....	4
Bruce:																	
Males	60	44	64	61	63	62	63	59	57	58	46	44	681	10	.....	2	4
Females	48	45	56	54	54	56	47	62	45	56	41	55	619	8	.....	2	3
Total	108	89	120	115	117	118	110	121	102	114	87	99	1,300	9 pair.	.....	4	7
Carleton:																	
Males	58	57	71	70	67	77	61	56	66	55	45	44	727	8	.....	79	2
Females	71	49	76	50	63	58	48	58	66	61	46	56	702	14	.....	70	1
Total	129	106	147	120	130	135	109	114	132	116	91	100	1,429	11 pair.	.....	149	3
Dufferin:																	
Males	16	13	15	24	17	18	16	24	17	21	23	22	226	2	.....	.....	2
Females	12	14	10	13	12	11	14	14	19	15	20	17	171	4	.....	....	2
Total	28	27	25	37	29	29	30	38	36	36	43	39	397	3 pair.	.....	.....	4
Elgin:																	
Males	38	38	36	34	22	41	42	35	30	31	29	30	406	6	.....	1	1
Females	35	29	33	44	30	30	25	35	26	31	23	49	390	4	.....	1	1
Total	73	67	69	78	52	71	67	70	56	62	52	79	796	5 pair.	.....	2	2

Essex :																	
Males	50	77	71	60	66	45	54	71	61	63	62	59	739	7		2	2
Females	65	67	65	59	63	35	84	63	40	53	64	45	703	13		2	1
Total	115	144	136	119	129	80	138	134	101	116	126	104	1,442	10 pair.		4	3
Frontenac :																	
Males	35	39	43	29	35	37	35	35	39	31	40	30	428	6		10	1
Females	34	25	35	36	30	36	32	30	28	32	22	36	376	6		5	1
Total	69	64	78	65	65	73	67	65	67	63	62	66	804	6 pair.		15	2
Grey :																	
Males	63	47	51	61	58	74	52	56	62	74	49	47	694	12		2	2
Females	48	50	59	55	52	47	53	66	48	66	53	64	661	10		4	3
Total	111	97	110	116	110	121	105	122	110	140	102	111	1,355	11 pair.		6	5
Haldimand :																	
Males	12	14	17	17	15	17	15	17	14	20	23	20	201	1		1	1
Females	9	19	15	21	18	8	13	26	18	19	18	14	198	1		1	1
Total	21	33	32	38	33	25	28	43	32	39	41	34	399	1 pair.		2	2
Halton :																	
Males	15	16	20	19	17	16	17	13	12	22	18	23	208	2		1	
Females	12	14	20	16	13	14	17	16	12	14	21	18	187	4		1	
Total	27	30	40	35	30	30	34	29	24	36	39	41	395	3 pair.		2	
Haliburton :																	
Males	3	6	7	7	7	7	10	9	2	7	2	15	82	1		2	1
Females	7	5	12	8	8	10	4	6	2	7	5	5	79	1		1	1
Total	10	11	19	15	15	17	14	15	4	14	7	20	161	1 pair.		3	2
Hastings :																	
Males	49	45	55	51	49	45	49	44	62	33	57	44	583	8		5	1
Females	43	26	47	46	41	41	53	39	38	34	24	35	467	8		3	1
Total	92	71	102	97	90	86	102	83	100	67	81	79	1,050	8 pair.		8	2
Huron :																	
Males	55	29	53	56	53	52	60	55	47	52	45	46	603	3		3	
Females	29	48	55	58	45	42	55	43	36	42	44	43	540	5		5	
Total	84	77	108	114	98	94	115	98	83	94	89	89	1,143	4 pair.		8	

BIRTHS BY MONTHS IN 1894.—COUNTIES.—*Continued.*

Counties.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of pairs of twins.	Triplets.	Illegitimate.	Still-born.
Kent:																	
Males	52	42	66	53	48	41	51	66	58	55	50	50	632	7	.....	3	.....
Females	37	42	57	42	41	41	46	41	43	34	33	48	505	3	.....	3	....
Total	89	84	123	95	89	82	97	107	101	89	83	98	1,137	5 pair.	.....	6	.....
Lambton:																	
Males	42	45	53	50	54	44	57	36	49	45	42	51	568	12	.....	2	1
Females	41	43	45	30	42	48	44	44	55	53	40	44	529	18	.....	2	1
Total	83	88	98	80	96	92	101	80	104	98	82	95	1,097	15 pair.	.....	4	2
Lanark:																	
Males	22	20	37	36	27	27	26	27	25	34	24	30	335	12	.....	1	2
Females	22	21	30	22	34	25	18	22	24	22	28	20	288	4	.....	1	1
Total	44	41	67	58	61	52	44	49	49	56	52	50	623	8 pair.	.....	2	3
Leeds and Grenville:																	
Males	29	32	29	45	24	52	44	37	26	27	43	32	420	5	2	1	1
Females	28	28	29	23	31	43	34	38	26	35	39	25	379	3	1	1	1
Total	57	60	58	68	55	95	78	75	52	62	82	57	799	4 pair.	1 case.	2	2
Lennox and Addington:																	
Males	17	20	16	11	19	14	8	20	14	11	15	16	181	5	.....	.....	.....
Females	18	15	20	10	12	16	11	14	18	16	8	11	169	1	.....	.....	.....
Total	35	35	36	21	31	30	19	34	32	27	23	27	350	3 pair.	.....	.....	.....
Lincoln:																	
Males	24	15	25	22	17	19	26	23	24	31	25	11	262	4	.....	3	1
Females	18	16	23	23	30	23	28	30	16	24	20	21	272	2	.....	2	1
Total	42	31	48	45	47	42	54	53	40	55	45	32	534	3 pair.	.....	5	2

Middlesex :																	
Males	82	37	66	71	73	70	61	82	62	72	59	44	779	9	.....	6	8
Females	61	61	74	76	80	61	73	80	79	55	59	63	822	11	.....	6	4
Total	143	98	140	147	153	131	134	162	141	127	118	107	1,601	10 pair.	.....	12	12
Muskoka and Parry Sound :																	
Males	61	62	73	57	66	72	69	61	54	62	35	47	719	9	.....	4	3
Females	47	60	73	54	63	67	74	55	66	57	39	35	690	19	.....	10	7
Total	108	122	146	111	129	139	143	116	120	119	74	82	1,409	14 pair.	.....	14	7
Norfolk :																	
Males	14	25	21	33	20	25	28	33	17	23	29	18	286	3	.....	6	1
Females	23	20	23	26	32	17	23	21	32	28	30	21	296	9	.....	2	1
Total	37	45	44	59	52	42	51	54	49	51	59	39	582	6 pair.	.....	8	2
Northumberland and Durham :																	
Males	55	42	47	53	51	59	49	42	59	49	47	36	589	14	.....	5	2
Females	50	43	54	58	39	30	48	34	48	40	42	40	526	10	.....	3	1
Total	105	85	101	111	90	89	97	76	107	89	89	76	1,115	12 pair.	.....	8	3
Ontario :																	
Males	40	31	35	31	28	37	42	42	39	33	46	42	446	2	.....	3	1
Females	33	40	26	41	34	36	43	33	44	28	34	35	427	2	.....	1	1
Total	73	71	61	72	62	73	85	75	83	61	80	77	873	2 pair.	.....	4	2
Oxford :																	
Males	45	42	47	47	35	48	53	44	43	47	49	52	552	12	.....	4	1
Females	42	46	46	50	46	32	35	29	41	42	36	45	490	10	.....	1	2
Total	87	88	93	97	81	80	88	73	84	89	85	97	1,042	11 pair.	.....	5	3
Peel :																	
Males	16	9	16	23	20	15	12	24	16	28	23	17	219	2	.....	1	1
Females	16	14	15	17	13	19	20	17	21	28	9	17	205	2	.....	1	.....
Total	32	23	31	40	33	34	32	41	37	56	31	34	425	2 pair.	.....	2	1
Perth :																	
Males	39	47	53	37	41	35	36	48	54	34	37	33	494	13	.....	3	.....
Females	33	29	36	37	33	35	45	35	42	36	45	29	435	9	.....	3	.....
Total	72	76	89	74	74	70	81	83	96	70	82	62	929	11 pair.	.....	6	.....

BIRTHS BY MONTHS IN 1894.—COUNTIES.—*Continued.*

Counties.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of pairs of twins.	Triplets.	Illegitimate.	Still-born.
Peterborough:																	
Males	35	38	40	29	38	39	36	41	36	33	26	36	427	6	....	3	.....
Females	32	30	40	29	41	40	31	42	32	40	31	21	409	4	... .	1	.....
Total	67	68	80	58	79	79	67	83	68	73	57	57	836	5 pair.	.....	4	.... .
Prescott and Russell:																	
Males	47	49	68	58	70	69	64	54	54	45	48	46	672	12	.....	.....	.....
Females	51	50	55	63	58	52	54	57	53	30	37	44	604	6	.....	...	.....
Total	98	99	123	121	128	121	118	111	107	75	85	90	1,276	9 pair.	.....	.....	.....
Prince Edward:																	
Males	13	10	13	14	17	11	21	16	15	10	9	19	168	4	.....	4	1
Females	10	13	16	17	15	16	11	15	8	10	10	18	159	2	.....	.....	1
Total	23	23	29	31	32	27	32	31	23	20	19	27	327	3 pair.	.....	4	2
Renfrew:																	
Males	62	41	58	74	60	47	52	58	41	43	43	71	650	8	.....	9	1
Females	41	51	57	52	55	38	48	48	41	50	46	62	589	2	.....	8	1
Total	103	92	115	126	115	85	100	106	82	93	89	133	1,239	5 pair.	.....	17	2
Simcoe:																	
Males	49	43	86	63	62	63	68	75	68	63	68	58	766	13	.....	4	4
Females	53	51	55	64	73	56	63	69	77	55	53	58	727	11	.....	4	3
Total	102	94	141	127	135	119	131	144	145	118	121	116	1,493	12 pair	.....	8	7
Stormont, Dundas and Glengarry:																	
Males	39	47	47	38	43	36	60	33	32	44	44	30	493	8	.....	1	1
Females	36	46	38	40	42	46	39	35	33	48	47	40	490	10	.....	1	2
Total	75	93	85	78	85	82	99	68	65	92	91	70	983	9 pair.	... .	2	2

Victoria:																	
Males	20	35	36	34	22	34	37	20	31	30	28	29	356	10	.....	2	1
Females	31	25	26	17	31	28	39	31	31	22	22	23	326	6	.....	4	1
Total	51	60	62	51	53	62	76	51	62	52	50	52	682	8 pair.	.....	6	2
Waterloo:																	
Males	35	49	55	51	52	47	52	47	50	55	55	45	593	10	.....	5	1
Females	42	56	48	58	59	44	52	50	49	50	50	38	596	14	.....	4	1
Total	77	105	103	109	111	91	104	97	99	105	105	83	1,189	12 pair.	.....	9	2
Welland:																	
Males	31	20	28	34	43	33	30	33	30	33	24	23	362	.....	.....	1	.....
Females	16	16	38	29	30	19	29	24	28	32	27	27	315	6	.....	1	.....
Total	47	36	66	63	73	52	59	57	58	65	51	50	677	3 pair.	.....	2	.....
Wellington:																	
Males	58	55	56	51	47	57	58	48	50	45	47	68	644	8	.....	4	3
Females	42	42	47	56	53	53	44	44	42	39	50	47	559	12	.....	2	1
Total	100	97	103	107	100	110	102	92	92	88	97	115	1,203	10 pair.	.....	6	4
Wentworth:																	
Males	52	84	74	75	67	77	89	62	57	66	64	79	846	23	.....	22	9
Females	56	64	73	68	66	79	46	62	51	60	59	68	752	17	.....	11	7
Total	108	148	147	143	133	156	135	124	108	126	123	147	1,598	20 pair.	.....	33	16
York:																	
Males	225	250	239	218	267	231	254	231	254	243	225	241	2,878	50	1	53	5
Females	215	193	239	268	233	217	242	232	246	226	209	256	2,776	42	2	35	3
Total	440	443	478	486	500	448	496	463	500	469	434	497	5,654	46 pair.	1 case.	91	8
Total Males	1,750	1,680	1,967	1,866	1,860	1,866	1,938	1,845	1,810	1,798	1,702	1,723	21,805	341	3	260	70
Total Females	1,575	1,565	1,838	1,822	1,780	1,630	1,754	1,733	1,698	1,651	1,544	1,656	20,246	329	3	207	56
Grand Total	3,325	3,245	3,805	3,688	3,640	3,496	3,692	3,578	3,508	3,449	3,246	3,379	42,051	335 pair.	2 cases.	467	126

BIRTHS BY MONTHS IN 1894.—CITIES.

Cities.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	No. of pairs of twins.	Triplets.	Illegitimate.	Still-born.
Toronto:																	
Males	160	190	185	169	184	163	194	156	191	196	166	179	2,133	36	.....	50	.....
Females	161	146	167	184	175	169	193	167	189	181	145	191	2,068	32	.....	37	....
Total	321	336	352	353	359	332	387	323	380	377	311	370	4,201	34 pair.	.....	87	.....
Hamilton:																	
Males	38	58	47	42	44	43	59	40	33	40	46	48	538	18	.....	19	7
Females	34	41	47	45	40	49	35	38	35	33	40	53	490	6	.....	9	6
Total	72	99	94	87	84	92	94	78	68	73	86	101	1,028	12 pair.	.....	28	13
Ottawa:																	
Males	32	34	42	42	48	48	35	44	47	33	27	20	452	5	.....	78	.....
Females	46	23	47	30	36	40	27	35	41	39	26	22	412	11	.....	67	.....
Total	78	57	89	72	84	88	62	79	88	72	53	42	864	8 pair.	.....	145	.....
London:																	
Males	30	17	19	26	24	27	25	32	22	30	20	17	289	4	.....	1	4
Females	19	24	25	28	27	19	22	28	23	16	26	27	284	6	.....	1	2
Total	49	41	44	54	51	46	47	60	45	46	46	44	573	5 pair.	.....	2	6
Kingston:																	
Males	13	17	17	7	12	12	11	12	21	12	16	8	158	2	.....	5	.....
Females	12	7	10	11	12	11	13	11	11	18	9	14	139	2	.....	3	.....
Total	25	24	27	18	24	23	24	23	32	30	25	22	297	2 pair.	.....	8	.....
Brantford:																	
Males	13	13	15	10	10	16	11	10	15	12	10	16	151	4	.....	.....	1
Females	15	15	16	14	14	11	12	14	15	9	13	15	163	2	.....	.....	3
Total	28	28	31	24	24	27	23	24	30	21	23	31	314	3 pair.	.....	.....	4

St. Thomas:																	
Males	12	11	11	4	6	16	16	5	3	9	8	11	112	4			
Females	7	10	11	16	9	6	8	14	6	11	4	14	116	2			
Total	19	21	22	20	15	22	24	19	9	20	12	25	228	3 pair.			
Guelph:																	
Males	11	11	10	6	12	11	9	11	12	10	10	13	126	3		3	1
Females	4	5	14	10	11	12	10	9	8	7	11	13	114	3		1	1
Total	15	16	24	16	23	23	19	20	20	17	21	26	240	3 pair.		4	2
St. Catharines:																	
Males	7	2	7	7	7	5	8	6	6	8	6	2	71			1	
Females	3	4	5	9	9	6	7	8	5	9	6	10	81				1
Total	10	6	12	16	16	11	15	14	11	17	12	12	152			1	1
Belleville:																	
Males	6	8	13	8	9	6	10	5	8	6	4	5	88	1		1	
Females	5	1	5	6	6	6	5	4	5	5	1	5	54	1		1	
Total	11	9	18	14	15	12	15	9	13	11	5	10	142	1 pair.		2	
Stratford:																	
Males	5	8	13	3	8	12	8	5	8	6	11	5	92	5			
Females	9	5	8	5	4	7	10	6	9	9	7	7	86	3		1	
Total	14	13	21	8	12	19	18	11	17	15	18	12	178	4 pair.		1	
Windsor:																	
Males	12	12	13	11	12	13	9	13	9	6	10	12	132	1		1	
Females	6	6	11	7	15	6	17	15	6	15	12	8	124	3			
Total	18	18	24	18	27	19	26	28	15	21	22	20	256	2 pair.		1	
Chatham:																	
Males	10	6	7	9	6	4	4	6	8	9	7	8	84	2			
Females	6	4	8	8	4	9	6	6	5	7	4	10	77				
Total	16	10	15	17	10	13	10	12	13	16	11	18	161	1 pair.			
Total Males	349	387	399	344	382	376	399	345	383	377	341	344	4,426	85		159	13
Total Females	327	291	374	373	362	351	365	355	358	359	304	389	4,208	71		120	13
Grand Total	676	678	773	717	744	727	764	700	741	736	645	733	8,634	78 pair.		279	26

MARRIAGES.

MARRIAGES BY DENOMINATIONS AND AGES, 1894.

Sex.	Religious denominations of bride and bridegroom.											How married.		Totals.	Counties.	Ages.											
	Church of England.	Presbyterians.	Methodists.	Roman Catholic.	Baptists.	Congregationalists.	Lutherans.	Evangelical Association.	Quakers.	Mennonites.	Other Denominations.	No Denomination given.	License.	Banns.			Under 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 and over.	Ages not given.
Males .	67	67	60	96	8	1	17	....	..	...	2	3	.....	....	321	Algoma	5	115	102	55	23	5	7	3	1	2	1	...	2
Females	53	65	75	95	11	1	17	....	..	1	2	1	.....	....	321		95	145	48	16	7	2	3	1	1	2	...	...	1
Total.	120	132	135	191	19	2	34	....	..	1	4	4	256	65	642		100	260	150	71	30	7	10	4	2	4	1	...	3
Males .	36	41	82	18	34	10	...	....	..	1	14	....	.....	....	236	Brant	7	83	74	25	27	9	6	2	...	1	...	1	1
Females	46	45	76	16	36	9	2	....	..	1	5	....	.....	....	236		46	98	59	17	6	6	...	...	...	1	...	1	2
Total.	82	86	158	34	70	19	2	....	..	2	19	...	226	10	472		53	181	133	42	33	15	6	2	...	2	...	2	3
Males .	38	136	129	53	13	1	12	8	..	...	7	1	...	...	398	Bruce	2	108	159	75	26	12	4	3	1	4	1	2	1
Females	36	120	134	55	22	2	6	9	.	3	11	....	.	....	398		74	176	101	27	9	4	2	...	...	3	...	1	1
Total.	74	256	263	108	35	3	18	17	..	3	18	1	350	48	796		76	284	260	102	35	16	6	3	1	7	1	3	2
Males .	124	98	99	255	10	5	11	....	..	...	6	....	.....	....	608	Carleton ...	9	168	217	100	39	20	22	5	7	2	3	4	12
Females	109	98	103	260	18	5	9	....	..	...	5	1	.....	....	608		92	268	136	40	25	13	9	3	2	4	...	...	16
Total.	233	196	202	515	28	10	20	....	..	...	11	1	421	187	1,216		101	436	353	140	64	33	31	8	9	6	3	4	28
Males .	33	50	45	2	4	....	...	....	..	...	6	...	.....	....	140	Dufferin	...	44	50	24	13	4	2	...	...	1	1	...	1
Females	33	53	39	1	3	....	...	.	..	...	11	....	....	....	140		27	68	30	8	2	1	1	1	1	...	...	...	1
Total.	66	103	84	3	7	....	...	....	..	...	17	....	140	....	280		27	112	80	32	15	5	3	1	1	1	1	...	2
Males .	36	55	99	13	58	3	1	....	..	...	6	10	.....	....	281	Elgin.....	4	93	86	50	20	11	9	2	1	2	...	2	1
Females	32	52	105	12	61	5	...	...	..	. .	6	8	.....	....	281		55	132	46	25	8	2	5	1	3	...	...	1	3
Total.	68	107	204	25	119	8	1	....	..	...	12	18	275	6	562		59	225	132	75	28	13	14	3	4	2	..	3	4

Males .	157	103	243	203	71	15	30	....	1	...	19	7	.....	....	854	Essex	13	365	220	129	44	27	16	12	14	8	4	2	....	1
Females	151	97	241	220	89	7	35	...	..	...	13	1	....	....	854		213	371	148	57	27	17	5	5	2	3	2	2	2	
Total.	308	200	484	423	160	22	70	....	1	...	32	8	764	90	1,708		226	736	368	186	71	44	21	17	16	11	6	4	2	
Males .	48	26	103	43	2	4	...	....	..	...	4	....	.....	....	230	Frontenac ..	4	80	67	34	18	11	7	2	3	...	1	1	2	
Females	49	20	101	45	5	8	...	....	..	...	2	....	.....	....	230		33	110	48	19	7	8	2	2	...	...	...	...	1	
Total.	97	46	204	88	7	12	...	....	..	...	6	....	198	32	460		37	190	115	53	25	19	9	4	3	...	1	1	3	
Males .	49	165	160	15	21	1	30	10	..	1	12	2	.....	....	466	Grey	1	129	160	113	26	13	8	4	5	2	1	1	5	
Females	37	166	157	16	33	....	33	10	..	1	12	1	.....	....	466		66	179	128	57	17	4	3	5	4	...	...	...	3	
Total.	86	331	317	31	54	1	63	20	..	2	24	3	430	36	932		67	308	288	168	43	17	11	9	9	2	1	1	8	
Males .	28	24	64	3	15	1	3	5	..	3	9	3	.....	....	158	Haldimand .	2	57	52	23	13	3	3	3	...	...	1	...	1	
Females	30	16	66	3	18	1	6	5	..	4	6	3	.....	....	158		22	87	29	11	3	3	...	1	...	1	...	...	1	
Total.	58	40	130	6	33	2	9	10	..	7	15	6	154	4	316		24	144	81	34	16	6	3	4	...	1	1	...	2	
Males .	20	35	50	2	1	2	...	....	..	...	4	....	. ....	....	114	Halton	.....	30	45	19	15	2	1	...	1	...	...	1	...	
Females	20	33	49	2	1	1	1	....	..	...	7	....	.....	.	114		17	42	36	10	4	1	2	1	...	1	...	...	....	
Total.	40	68	99	4	2	3	1	....	..	...	11	....	111	3	228		17	72	81	29	19	3	3	1	1	1	...	1	....	
Males .	59	60	235	27	8	2	...	....	..	...	4	1	....	....	396	Hastings ...	6	146	138	42	27	10	6	3	4	2	2	6	4	
Females	70	48	235	30	8	1	...	....	..	...	3	1	.....	....	396		96	182	66	23	10	6	3	1	...	1	1	2	5	
Total.	129	108	470	57	16	3	...	....	..	...	7	2	373	23	792		102	328	204	65	37	16	9	4	4	3	3	8	9	
Males .	6	4	14	2	2	....	...	....	..	...	4	5	.....	...	37	Haliburton .	1	14	16	2	.....	1	...	1	1	1	...	...	....	
Females	6	2	19	1	2	....	...	....	..	...	3	4	.....	....	37		13	18	3	1	.....	1	...	1	...	...	...	...	....	
Total.	12	6	33	3	4	....	...	....	..	...	7	9	37	....	74		14	32	19	3	....	2	...	2	1	1	...	...	....	
Males .	45	147	145	21	8	6	10	5	..	2	8	1	.....	....	398	Huron	.....	88	174	86	20	9	7	6	3	2	1	2	....	
Females	54	149	110	24	5	3	9	5	.	2	7	....	.....	....	398		45	194	105	30	10	6	5	2	...	1	...	...	....	
Total.	99	296	285	45	13	9	19	10	..	4	15	1	364	34	796		45	282	279	116	30	15	12	8	3	3	1	2	....	
Males .	47	98	193	49	33	3	2	....	..	...	14	9	.....	....	448	Kent	9	167	144	63	31	14	4	4	5	5	2	...	....	
Females	43	90	209	49	36	2	1	....	..	...	15	3	.....	....	448		103	191	86	29	18	5	4	3	4	3	1	...	1	
Total.	90	188	402	98	69	5	3	....	..	...	29	12	410	38	896		112	358	230	92	49	19	8	7	9	8	3	...	1	

MARRIAGES BY DENOMINATIONS AND AGES, 1894.—*Continued.*

Sex.	Religious denominations of bride and bridegroom.											How married.		Totals.	Counties.	Ages.											
	Church of England.	Presbyterians.	Methodists.	Roman Catholic.	Baptists.	Congregationalists.	Lutherans.	Evangelical Association.	Quakers.	Mennonites.	Other Denominations.	No Denomination given.	License.	Banns.			Under 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 and over.	Ages not given.
Males .	54	71	127	12	28	10	1	....	..	...	5	1	.....	....	309	Lambton ...	1	101	98	54	31	10	5	5	1	2	...	...	1
Females	51	79	133	13	18	8	1	....	..	...	5	1	.....	....	309		53	150	63	19	15	2	2	2	1	1	...	...	1
Total.	105	150	260	25	46	18	2	.. .	..	...	10	2	300	9	618		54	251	161	73	46	12	7	7	2	3	...	...	2
Males .	64	88	56	25	5	8	1	4	1	..	3	3	... .	....	258	Lanark	1	81	82	50	21	7	8	2	4	2	...	...	...
Females	57	82	67	27	8	10	...	3	..	..	3	1	.....	....	258		29	111	68	37	5	4	3	1	...	...	...	...	....
Total.	121	170	123	52	13	18	1	7	1	...	6	4	241	17	516		30	192	150	87	26	11	11	3	4	2	...	...	....
Males .	92	57	153	36	11	1	..	....	..	...	4	4	.....	...	358	Leeds and Grenville.	8	120	107	54	22	15	11	8	5	3	4	1	....
Females	72	67	163	38	13	....	...	....	..	...	3	2	.....	....	358		56	168	80	24	13	8	1	5	2	1	...	...	....
Total.	164	124	316	74	24	1	...	....	..	...	7	6	330	28	716		64	288	187	78	35	23	12	13	7	4	4	1	....
Males .	18	21	106	21	2	1	...	....	..	...	2	....	.....	....	171	Lennox and	3	65	57	29	5	3	3	4	1	1	...	...	....
Females	19	15	111	20	1	1	...	....	..	...	4	....	.....	....	171		39	79	25	15	7	3	1	...	...	1	...	...	....
Total.	37	36	217	41	3	2	...	....	..	...	6	....	154	17	342		42	144	83	44	12	6	4	4	1	2	...	...	....
Males .	26	30	75	12	12	....	2	2	..	1	7	9	.....	....	176	Lincoln.....	5	71	52	17	13	5	4	3	...	2	1	2	1
Females	29	30	75	15	12	1	1	2	..	1	8	2	.....	....	176		30	85	36	8	7	4	2	1	...	1	..	2	....
Total.	55	60	150	27	24	1	3	4	..	2	15	11	172	4	352		35	156	88	25	20	9	6	4	...	3	1	4	1
Males .	123	133	239	35	30	5	4	....	..	...	15	2	.....	....	586	Middlesex ..	9	186	163	125	43	21	20	7	3	4	2	2	1
Females	140	132	223	34	36	5	1	....	..	...	15	....	....	....	586		91	236	158	57	20	11	7	3	1	1	...	...	1
Total.	263	265	462	69	66	10	5	....	..	...	30	2	561	25	1,172		100	422	321	182	63	32	27	10	4	5	2	2	2

Males .	61	97	113	54	10	1	3	1	..	...	4	4	.....	....	348	Muskoka & Parry Sound	2	121	122	58	16	11	2	7	2	3	3	...	1
Females	51	96	125	54	10	....	6	1	..	...	5	....	.....	....	348		122	149	42	14	3	4	10	4	...	...	...	...	....
Total.	112	193	238	108	20	1	9	2	..	...	9	4	300	48	696		124	270	164	72	19	15	12	11	2	3	3	...	1
Males .	16	20	88	8	59	1	4	....	..	...	5	8	.....	....	209	Norfolk	4	87	61	23	13	7	3	7	3	...	1	...	..
Females	18	11	95	8	68	....	2	1	..	...	3	3	.....	...	209		62	84	35	10	7	5	1	3	...	...	2	...	....
Total.	34	31	183	16	127	1	6	1	..	...	8	11	202	7	418		66	171	96	33	20	12	4	10	3	...	3	...	....
Males .	53	78	232	14	12	3	...	....	..	...	6	4	.....	....	402	Northumb'ld & Durham	2	133	142	61	25	14	7	9	3	3	2	1	....
Females	53	79	239	11	11	4	...	..	..	...	4	1	.....	....	402		49	198	86	34	19	8	4	1	2	1	...	...	....
Total.	106	157	471	25	23	7	...	....	..	...	10	5	392	10	804		51	331	228	95	44	22	11	10	5	4	2	1	....
Males .	26	56	111	15	12	2	...	....	..	...	7	....	.....	....	229	Ontario	3	67	86	28	20	10	4	3	2	2	2	2	....
Females	21	53	122	17	11	....	...	....	..	...	5	....	.....	....	229		25	115	48	15	15	3	3	3	2	...	...	...	....
Total.	47	109	233	32	23	2	...	....	..	...	12	....	215	14	458		28	182	134	43	35	13	7	6	4	2	2	2	....
Males .	29	65	131	4	47	4	2	4	1	4	5	2	.....	....	298	Oxford	1	86	103	47	22	14	9	6	...	5	2	3	.. .
Females	27	60	136	4	46	7	3	4	1	5	5	....	.....	....	298		46	125	69	25	5	13	3	3	4	1	1	1	2
Total.	56	125	267	8	93	11	5	8	2	9	10	2	294	4	596		47	211	172	72	27	27	12	9	4	6	3	4	2
Males .	22	27	61	16	4	2	...	....	..	...	1	1	.....	....	134	Peel	2	28	43	32	13	5	2	2	4	3	...	. .	....
Females	16	34	60	16	3	3	...	....	..	...	1	1	.....	....	134		8	64	41	5	9	2	...	4	...	...	1	...	...
Total.	38	61	121	32	7	5	...	....	..	...	2	2	119	15	268		10	92	84	37	22	7	2	6	4	3	1	...	....
Males .	43	104	80	30	15	1	38	18	..	2	6	2	.....	....	339	Perth	2	99	125	59	28	8	7	4	3	1	2	...	1
Females	40	104	75	30	17	....	43	25	..	2	2	1	.....	....	339		47	159	90	19	10	5	4	3	...	...	...	...	2
Total.	83	208	155	63	32	1	81	43	..	4	8	3	300	39	678		49	258	215	78	38	13	11	7	3	1	2	...	3
Males .	28	45	80	30	14	....	...	....	..	...	3	....	.....	....	200	Peterboro'	2	62	73	28	16	8	2	1	4	2	...	1	1
Females	30	40	86	33	8	....	...	....	..	...	3	....	.....	....	200		33	100	35	10	8	6	4	3	...	...	...	...	1
Total.	58	85	166	63	22	....	...	....	..	...	6	....	172	23	400		35	162	108	38	24	14	6	4	4	2	...	1	2
Males .	10	18	20	272	5	2	...	....	..	...	....	....	.....	....	327	Prescott and Russell	13	130	112	32	15	9	4	3	2	3	2	...	2
Females	6	22	16	273	8	2	...	....	..	...	....	....	.....	..	327		100	148	40	19	6	3	5	1	1	2	...	...	2
Total.	16	40	36	545	13	4	...	...	..	...	....	....	70	257	654		113	278	152	51	21	12	9	4	3	5	2	...	4

MARRIAGES BY DENOMINATIONS AND AGES, 1894.—*Continued.*

Sex	Religious denominations of bride and bridegroom.											How married.		Totals.	Counties.	Ages.										
	Church of England.	Presbyterians.	Methodists.	Roman Catholic.	Baptists.	Congregationalists.	Lutherans.	Evangelical Association.	Quakers.	Mennonites.	Other Denominations.	No Denomination given.	License.	Banns.			Under 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 and over.	Ages not given.
Males .	17	7	99	12	2	....	..	....	..	...	15	1	.....	.....	155	Prince Edward.	6	65	37	15	8	7	4	2	3	4	1	2	1
Females	20	6	105	8	.....	....	...	....	..	...	16	....	.....	.....	155		35	57	31	15	6	2	3	3	...	2	...	...	1
Total.	37	15	204	20	2	....	...	....	..	...	31	1	136	19	310		41	122	68	30	14	9	7	5	3	6	1	2	2
Males .	42	73	58	111	9	....	24	16	..	...	1	1	....	.....	335	Renfrew ...	3	91	141	56	18	10	7	4	1	3	...	...	1
Females	31	79	58	113	10	....	27	15	..	...	1	1	.....	.....	335		75	169	58	18	6	3	4	...	1	..	...	...	1
Total	73	152	116	224	19	....	51	31	..	...	2	2	210	125	670		78	260	199	74	24	13	11	4	2	3	...	...	2
Males .	93	143	170	50	21	5	1	....	..	2	3	4	.....	.....	492	Simcoe	9	157	178	75	28	18	11	8	4	1	...	1	2
Females	101	141	171	44	17	6	1	....	..	8	3	...	...	.....	492		88	240	100	31	16	10	3	2	...	...	...	...	2
Total.	194	284	341	94	38	11	2	....	..	10	6	4	457	35	984		97	397	278	106	44	28	14	10	4	1	...	1	4
Males .	37	104	82	130	4	1	17	5	..	...	3	2	.. ..	.....	385	Stor't, Dundas & Glen'y	8	145	98	55	30	23	6	6	2	3	2	...	7
Females	30	93	89	131	9	3	19	5	..	...	5	1	.....	.....	335		92	160	68	25	12	13	7	4	...	...	...	...	4
Total.	67	197	171	261	13	4	36	10	..	...	8	3	271	114	770		100	305	166	80	42	36	13	10	2	3	2	...	11
Males .	26	43	98	15	10	....	...	....	..	...	9	....	.....	.....	201	Victoria ...	.....	54	90	38	8	6	3	1	1	...	...	...	....
Females	25	41	102	15	13	....	...	....	..	...	5	....	.....	.....	201		28	102	50	8	7	1	4	...	1	...	...	...	....
Total.	51	84	200	30	23	....	...	....	..	...	14	....	190	11	402		28	156	140	46	15	7	7	1	2	...	...	...	....
Males .	26	54	63	46	13	....	76	22	..	31	11	17	.....	.....	359	Waterloo ..	5	114	143	54	24	9	3	1	2	1	1	2	...
Females	23	54	57	51	15	....	84	24	.	32	7	12	.....	.....	359		43	188	78	30	12	...	4	2	1	...	1	...	....
Total.	49	108	120	97	28	....	160	46	..	63	18	29	250	109	718		48	302	221	84	36	9	7	3	3	1	2	2	....

Males .	45	46	62	17	15	....	10	6	2	6	22	6	.....	.....	237	Welland ..	1	80	71	43	18	11	5	1	2	1	1	3	....
Females	54	42	58	13	21	....	15	4	2	10	16	2	.....	.....	237		33	115	52	15	9	6	3	3	...	..	1	...	....
Total.	99	88	120	30	36	....	25	10	4	16	38	8	227	10	474		34	195	123	58	27	17	8	4	2	1	2	3	....
Males .	50	123	106	43	14	13	2	....	..	1	15	3	.....	.....	370	Wellington.	1	105	131	72	31	15	4	2	2	5	...	2	....
Females	37	135	110	43	11	7	2	2	1	1	21	....	.....	.....	370		46	173	88	39	12	5	2	2	1	1	...	...	1
Total.	87	258	216	86	25	20	4	2	1	2	36	3	338	32	740		47	278	219	111	43	20	6	4	3	6	...	2	1
Males .	106	133	225	53	35	9	9	2	..	...	18	6	..	... .	596	Wentworth.	6	208	176	87	44	17	16	18	8	6	4	5	1
Females	112	127	220	67	34	8	7	2	..	...	13	6	.....	... .	596		80	263	135	51	26	16	8	7	...	8	..	1	1
Total.	218	260	445	120	69	17	16	4	..	...	31	12	577	19	1,192		86	471	311	138	70	33	24	25	8	14	4	6	2
Males .	461	391	569	144	101	32	13	.....	..	7	53	11	.....	.....	1,782	York	17	616	588	271	130	64	41	18	16	10	4	4	3
Females	473	379	550	171	105	32	10	....	..	10	41	11	.....	.....	1,782		210	848	430	155	73	29	11	15	3	2	3	...	3
Total.	934	770	1,119	315	206	64	23	....	..	17	94	22	1,682	100	3,564		227	1,464	1,018	426	203	93	52	33	19	12	7	4	6
Males .	2,361	3,138	4,925	2,007	778	155	328	108	5	61	342	133	.....	.....	14,341	....	177	4,759	4,783	2,301	984	478	293	182	124	102	52	53	53
Females	2,305	3,055	4,995	2,078	853	142	341	117	4	81	302	68	.....	.....	14,341		2,517	6,547	3,076	1,068	481	245	143	102	37	42	13	11	59
Total.	4,666	6,193	9,920	4,085	1,631	297	669	225	9	142	644	201	12,669	1,672	28,682		2,694	11,306	7,859	3,369	1,465	723	436	284	161	144	65	64	112

MARRIAGES BY MONTHS, 1894.

Counties.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	No date given.	Total number of couples married.
Algoma	19	18	24	26	25	23	41	20	27	34	38	25	1	321
Brant	16	18	19	18	20	25	13	14	28	23	17	25	.....	236
Bruce	40	31	35	44	27	24	24	19	40	31	38	45	.....	398
Carleton	45	32	31	47	40	72	55	44	77	70	58	37	.....	608
Dufferin	12	19	12	11	3	8	4	7	6	21	20	17	.....	140
Elgin	26	26	20	18	29	23	14	13	26	20	42	24	.....	281
Essex	61	48	51	67	63	78	78	72	88	109	81	58	.....	854
Frontenac	22	18	20	15	15	29	14	18	24	20	14	21	.....	230
Grey	44	34	73	28	17	34	19	23	35	55	37	67	.....	466
Haldimand	12	12	8	13	8	18	6	9	15	23	13	21	.....	158
Halton	14	8	9	7	8	11	4	6	7	13	10	17	.....	114
Hastings	27	28	31	30	27	39	26	18	40	47	35	46	2	396
Haliburton	3	6	1	6	2	2	3	2	2	4	3	3	.....	37
Huron	38	35	47	29	20	27	16	19	31	53	28	55	.....	398
Kent	42	19	23	25	35	33	26	24	42	75	43	58	.....	448
Lambton	30	30	19	23	21	24	16	15	20	41	34	36	.....	309
Lanark	18	12	26	27	15	25	14	11	18	28	28	36	.....	258
Leeds and Grenville	40	22	24	27	20	28	14	28	47	38	24	46	.....	358

Lennox and Addington	10	15	9	17	13	15	13	12	25	11	12	19	.....	171
Lincoln	12	17	12	10	6	20	12	16	18	14	19	20	.....	176
Middlesex	51	32	45	53	34	75	42	33	65	55	53	47	1	586
Muskoka and Parry Sound	26	21	25	30	22	25	18	37	36	35	35	38	.....	348
Norfolk	22	13	16	19	11	12	14	10	14	19	18	41	.....	209
Northumberland and Durham	48	35	39	20	22	32	19	26	27	36	40	58	.....	402
Ontario	15	18	26	19	17	18	13	8	30	24	18	23	.....	229
Oxford	29	17	26	26	28	23	13	14	27	28	32	35	.....	298
Peel	7	14	20	9	7	11	4	7	11	13	10	21	.....	134
Perth	41	27	35	31	13	10	17	13	41	37	30	44	.....	339
Peterborough	22	16	17	19	8	22	9	11	12	25	18	21	.....	200
Prescott and Russell	31	20	9	26	20	40	43	30	46	30	25	7	.....	327
Prince Edward	14	10	13	12	10	13	5	6	12	15	21	24	.....	155
Renfrew	20	15	19	38	21	46	32	22	33	27	41	19	2	335
Simcoe	38	36	45	34	15	43	23	35	48	71	39	64	1	492
Stormont, Dundas and Glengarry	39	20	23	23	28	36	18	26	56	47	32	37	.....	385
Victoria	18	22	18	11	12	20	10	15	22	13	19	21	.....	201
Waterloo	28	20	35	42	32	39	18	14	29	37	34	31	.....	359
Welland	23	11	16	17	15	22	16	24	23	24	16	30	.....	237
Wellington	35	42	33	28	24	31	22	18	25	32	31	18	1	370
Wentworth	62	37	41	55	28	33	30	40	57	66	50	77	.....	596
York	147	118	114	148	110	241	115	127	174	175	133	180	.....	1,782
Total	1,247	992	1,112	1,148	891	1,370	893	906	1,404	1,539	1,289	1,542	8	14,341

DEATHS.

DEATHS BY COUNTIES IN 1894.

ALGOMA (Mattawa, Sault Ste. Marie, North Bay, Port Arthur, Fort William, Rat Portage and Sudbury not included.)—POPULATION, 45,361.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	2	....	6	....	....	6	....	....	4	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	3	1	..	..	..	6
2. Cholera Morbus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1
3. Diarrhœa Acuta	2	6	....	8	...	....	8	....	....	2	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	2	1	2	8
4. Dysentaria Acuta	2	..	....	....	2	....	....	...	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	11	6	....	17	....	....	17	....	....	3	6	2	3	3	..	..	..	..	..	..	..	..	..	9	1	1	1	..	1	2	1	1	..	..	..	17
6. Erysipelas	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
7. Febris Typhoides	12	5	....	9	3	5	4	2	11	..	2	..	..	1	1	2	3	1	..	1	..	..	6	2	..	..	5	1	2	..	..	..	1	2	4	17
8. Scarlatina	2	4	....	6	....	....	6	....	....	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	2	6
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	5	1	....	5	1	....	1	1	4	..	1	..	..	..	1	..	..	..	..	3	1	..	..	1	1	1	1	..	1	..	..	..	..	..	1	6
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	3	2	....	5	....	....	5	....	....	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	1	1	..	5
13. Pyæmia	....	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	1	1	....	1	1	..	1	....	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2
Total Zymotic Diseases	44	28	....	57	9	6	48	3	21	13	18	9	3	4	2	2	3	2	1	4	4	..	7	14	4	2	7	3	4	5	9	5	5	7	7	72
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	....	....	3	....	....	1	....	2	..	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	3
2. Anæmia	8	3	....	9	2	....	9	....	2	7	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	3	2	..	..	2	1	1	..	..	2	11
3. Anasarca	4	1	....	3	2	....	....	1	4	..	..	..	..	..	..	..	1	..	..	3	..	1	..	..	..	..	..	..	..	..	1	2	1	..	1	5
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
5. Carcinoma	1	1	.	1	....	1	1	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
6. Rheumatism and Gout	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	11	9	....	13	5	2	4	1	15	2	..	..	..	..	3	4	5	3	..	3	..	..	..	4	..	2	2	5	1	1	..	2	1	1	1	20
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY COUNTIES IN 1894 —*Continued.*

ALGOMA (Mattawa, Sault Ste. Marie, North Bay, Port Arthur, Fort William, Rat Portage and Sudbury not included.)—POPULATION, 45,361.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	34	23	....	39	12	6	25	6	26	18	4	3	..	..	1	3	3	4	4	5	6	1	5	6	3	4	6	.	5	2	5	6	6	5	9	57
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	11	10	....	21	....	....	21	....	....	21	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	3	8	..	2	1	..	..	1	21
2. Diseases of Parturition	....	3	....	3	....	....	....	3	....	..	..	..	..	..	2	..	1	..	..	..	..	..	..	1	.	..	1	..	..	..	..	..	..	1	..	3
3. Diseases of Old Age	7	8	....	3	11	1	....	4	11	..	..	..	..	..	..	..	.	..	..	..	7	8	..	2	1	3	..	..	..	1	2	1	1	2	2	15
Total Developmental Dis's.	18	21	....	27	11	1	21	7	11	21	..	..	..	..	2	..	1	..	..	..	7	8	..	5	2	3	4	3	8	1	4	2	1	3	3	39
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	..	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
2. Wounds and other Accidents	11	1	....	5	5	2	1	....	11	..	..	1	..	1	3	1	2	1	1	1	1	..	..	2	..	4	..	1	..	2	..	..	1	2	..	12
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowned	2	1	....	3	....	....	1	1	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	1	..	..	..	3
Total Violent Deaths	13	2	....	8	5	2	2	1	12	..	1	1	..	1	4	1	2	1	1	1	1	..	1	2	..	4	..	1	1	2	1	1	1	2	..	15
Cause not specified	7	13	2	15	3	4	13	1	8	8	2	1	1	..	..	2	1	.	3	1	..	..	3	5	1	1	3	..	1	2	1	1	1	4	2	22
Total from all causes	145	101	2	175	50	23	121	20	101	69	27	14	4	6	12	15	17	11	9	18	19	10	17	37	11	19	25	14	20	15	22	21	17	22	25	218

DEATHS BY COUNTIES IN 1894.—*Continued.*

BRANT (Brantford and Paris not included.)– POPULATION, 37,585.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	....	...	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	4	5	...	8	1	....	9	....	....	1	4	2	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..	1	..	1	..	3	..	9
6. Erysipelas	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
7. Febris Typhoides	2	1	....	3	...	....	1	1	1	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	3
8. Scarlatina	4	2	....	6	....	....	6	....	....	..	2	2	1	..	1	..	..	..	..	..	..	..	..	1	1	1	..	2	..	..	1	..	..	..	..	6
9. Puerperal Fever	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	2	4	....	2	3	1	1	3	2	..	..	..	1	..	..	..	1	..	..	2	2	..	..	1	..	1	..	..	..	..	..	..	..	4	6
11. Morbilli	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	15	14	....	24	4	1	21	5	3	3	8	4	4	..	1	..	..	1	1	2	3	2	..	3	3	2	..	4	..	1	1	6	1	3	5	29
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	2
2. Anæmia	4	2	....	6	....	....	2	2	2	2	..	..	..	..	..	..	..	1	3	..	..	..	..	..	1	..	1	1	..	..	2	..	..	1	6
3. Anasarca	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
5. Carcinoma	4	2	....	5	1	....	....	2	4	..	..	..	..	..	..	..	1	2	..	1	1	1	..	..	..	1	1	1	1	1	..	..	..	1	..	6
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	6	12	....	14	4	....	9	6	3	1	1	..	1	3	2	2	3	..	2	2	..	1	..	1	..	2	2	1	..	2	1	1	5	2	1	18
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

BRANT (Brantford and Paris not included.)—POPULATION, 37,585.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	17	18	....	27	8	....	11	12	12	3	1	..	1	4	2	2	4	2	4	7	3	2	..	1	3	3	4	4	1	3	1	5	5	3	2	35
NERVOUS DISEASES.																																			
1. Apoplexy	....	2	....	1	1	....	..	2	....	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	2
2. Convulsions	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
3. Encephalitis	....	2	....	1	1	....	1	1	....	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
4. Epilepsy	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	.	.	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Meningitis	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	4	4	....	2	6	..	....	4	4	..	..	..	..	..	..	..	..	..	2	6	..	..	..	1	..	2	1	1	..	..	1	1	..	..	1	8
Total	6	8	....	6	8	....	3	7	4	1	1	..	..	1	..	..	..	..	5	6	..	..	..	2	..	2	1	1	..	1	2	2	1	..	2	14
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2
5. Valvular Diseases	4	1	....	3	2	....	1	1	3	..	..	..	..	..	..	..	1	1	..	1	2	..	..	..	1	..	2	..	..	..	..	1	..	1	..	5
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	4	....	1	4	....	1	3	1	..	..	..	..	..	..	..	..	..	1	3	1	..	..	..	1	..	1	1	..	..	..	2	..	..	..	5
Total	6	6	....	6	6	....	2	5	5	..	..	..	..	..	..	..	2	1	1	2	5	1	..	..	3	..	3	1	..	..	..	4	..	1	..	12
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	5	....	5	2	....	2	5	....	1	1	..	..	..	..	..	..	..	..	3	2	..	..	1	1	2	1	..	..	..	..	..	..	1	1	7
2. Pneumonia	2	4	....	4	2	....	1	2	3	..	..	..	1	..	..	..	..	..	..	1	3	1	..	..	1	..	3	1	..	..	..	..	1	..	..	..	6
3. Pleurisy	2	....	....	1	1	....	1	...	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	2
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	6	9	....	10	5	...	4	7	4	1	2	..	1	..	..	..	..	..	..	4	6	1	..	1	2	2	4	1	..	1	..	..	1	1	2	15

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DEATHS BY COUNTIES IN 1894.—*Continued.*

BRUCE (Walkerton, Wiarton and Kincardine not included).—POPULATION, 66,625.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	12	8	....	20	....	....	20	....	....	15	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	11	2	..	..	20
2. Cholera Morbus	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	3
3. Diarrhœa Acuta	7	8	....	13	2	....	14	1	....	10	3	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	5	5	4	..	..	15
4. Dysentaria Acuta	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	12	6	....	18	....	....	17	....	1	..	9	6	2	..	..	1	..	..	..	..	..	..	..	2	4	..	4	..	..	..	..	2	3	3	18
6. Erysipelas	1	1	...	1	1	....	....	....	2	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	2
7. Febris Typhoides	7	1	....	7	1	....	5	...	3	..	4	..	1	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	2	1	8
8. Scarlatina	1	3	....	4	....	....	4	....	....	..	3	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	1	4
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	10	10	....	6	13	1	2	6	12	1	..	1	..	1	..	..	..	..	4	2	7	3	1	7	6	1	3	1	..	..	..	2	..	..	20
11. Morbilli	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
12. Whooping Cough	3	6	....	9	....	....	9	...	....	7	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	2	1	2	1	..	..	9
13. Pyæmia	3	3	....	3	3	....	2	1	3	..	1	..	1	..	..	..	..	..	1	1	2	..	..	1	1	2	..	..	1	..	..	..	..	1	..	6
14. Variola	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	59	48	....	82	24	1	73	10	24	33	26	9	4	2	1	5	..	..	5	4	13	4	1	14	12	5	8	2	3	5	14	21	14	5	4	107
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	1	....	3	....	....	....	....	3	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3
2. Anæmia	9	5	...	14	....	....	9	1	4	6	4	..	..	1	1	..	..	..	1	1	..	..	..	1	2	..	2	1	..	2	1	1	2	2	..	14
3. Anasarca	7	4	....	3	8	....	....	1	10	..	..	..	..	..	..	2	..	..	2	2	3	2	..	1	..	..	1	2	1	..	1	1	1	1	2	11
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Carcinoma	3	9	....	4	8	....	....	6	6	..	..	..	..	..	..	..	2	2	2	1	5	..	..	..	..	..	..	..	3	..	1	3	2	..	3	12
6. Rheumatism and Gout	2	3	....	3	2	....	2	1	2	..	..	1	..	..	..	..	1	1	..	..	1	1	..	..	1	..	..	1	..	1	1	..	..	1	5
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Phthisis	25	26	....	46	5	....	16	9	26	3	2	..	3	6	5	9	8	8	2	2	1	..	2	3	3	5	9	2	5	1	4	7	6	4	2	51
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	1	1	....	2	....	....	2	....	....	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

*BRUCE (Walkerton, Wiarton and Kincardine not included.)—POPULATION, 66,625.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
2. Ostitis	....	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases...	....	....	....	....	....	....	....	....	....	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	... ..
Total Local Diseases	104	89	....	107	86	....	62	45	86	22	24	6	2	6	5	5	13	9	21	30	29	18	3	17	12	22	18	18	21	12	11	12	18	14	18	193
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	13	2	....	15	....	....	15	....	....	15	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	2	..	..	3	2	..	2	1	15
2. Diseases of Parturition	....	5	....	4	1	....	....	5	....	..	..	..	..	..	2	1	2	..	..	..	..	..	..	..	..	..	..	1	1	..	1	.	1	..	1	5
3. Diseases of Old Age	28	29	....	3	54	....	...	22	35	..	..	..	..	..	..	..	..	..	..	..	27	30	..	4	1	5	6	7	6	6	3	6	5	4	4	57
Total Developmental Dis's.	41	36	....	22	55	....	15	27	35	15	..	..	..	..	2	1	2	..	..	..	27	30	..	5	2	7	7	10	7	6	7	8	6	6	6	77
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	14	2	....	13	2	1	7	1	8	..	1	1	2	..	4	1	1	..	2	1	1	..	2	1	3	2	..	1	2	2	2	1	..	1	1	16
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Suicide	3	2	....	4	1	....	....	2	3	..	..	..	..	..	..	2	..	3	..	..	..	..	..	....	..	3	2	..	..	..	..	..	..	..	..	5
5. Drowning	3	2	....	4	1	....	3	....	2	..	..	2	1	..	1	1	..	..	..	..	..	..	..	..	..	.	..	..	1	..	1	..	1	2	..	5
Total Violent Deaths	20	6	...	21	4	1	10	3	13	..	1	3	3	..	5	4	1	3	2	1	1	..	2	1	3	5	2	1	3	2	3	1	1	3	1	26
Cause not specified	2	2	....	4	....	....	3	....	1	1	2	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	1	4
Total from all causes	275	230	...	311	192	2	182	103	220	80	59	19	12	16	20	27	28	21	36	41	80	55	8	43	35	44	47	37	44	29	44	56	52	36	38	505

*One case of Lockjaw not included.

DEATHS BY COUNTIES IN 1894.—*Continued.*

CARLETON (Ottawa not included).—POPULATION, 80,059.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
2. Cholera Morbus	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	..	3	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	3
4. Dysentaria Acuta	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	14	10	....	23	1	....	22	1	1	1	9	8	1	3	1	.	1	..	..	..	..	..	..	..	2	2	3	1	2	1	2	2	..	1	5	3	24
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	5	6	....	9	2	....	7	....	4	..	1	..	2	2	1	1	2	..	1	1	..	..	..	..	..	1	..	..	..	1	2	..	2	..	3	2	11
8. Scarlatina	10	7	....	17	....	....	17	....	....	3	7	2	4	1	..	..	..	..	..	..	..	..	..	..	..	..	2	4	4	5	..	2	..	..	..	17
9. Puerperal Fever	..	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
10. Influenza	3	1	..	1	3	..	1	....	3	..	..	..	..	..	1	..	..	..	..	..	2	1	..	2	..	1	..	..	..	..	..	..	..	1	..	4
11. Morbilli	..	1	....	1	....	....	1	..	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
12. Whooping Cough	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
13. Pyæmia	....	1	....	....	1	..	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
14. Variola	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	34	34	....	59	9	...	55	5	8	8	20	10	8	6	3	2	3	..	1	2	1	1		4	3	4	4	6	9	10	7	5	1	9	6	68
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Anæmia	5	5	1	10	....	1	9	....	2	7	2	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	1	1	5	..	..	1	1	1	11
3. Anasarca	1	3	....	2	2	....	....	3	1	..	..	..	..	..	..	..	..	..	1	2	..	..	1	1	1	1	..	..	..	..	..	..	1	..	..	4
4. Asthma	1	....	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Carcinoma	5	7	....	8	3	1	....	4	8	..	..	..	..	..	..	..	2	4	2	3	1	..	..	..	1	1	1	..	1	1	1	1	..	2	3	12
6. Rheumatism and Gout	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
7. Hydrocephalus	....	3	....	3	....	....	2	....	1	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	3
8. Phthisis	16	20	....	33	2	1	15	6	15	7	..	..	..	5	5	3	5	6	3	1	1	..	..	1	2	6	2	1	..	5	3	2	7	2	2	36
9. Tabes Mesenterica	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY COUNTIES IN 1894.—*Continued.*

CARLETON (Ottawa not included).—POPULATION, 80,059.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15	15-20.	20-25.	25-35.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	Oct ber.	November.	December	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	29	38	1	56	9	3	26	13	29	14	4	..	..	5	5	3	7	10	7	8	3	..	2	6	4	9	3	2	2	11	5	3	12	5	6	68
NERVOUS DISEASES.																																			
1. Apoplexy	2	1	....	1	2	....	....	....	3	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	3
2. Convulsions	....	3	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	..	3
3. Encephalitis	1	2	....	2	1	....	2	....	1	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	1	3
4. Epilepsy	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
5. Insanity	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Meningitis	1	3	....	4	....	....	3	....	1	2	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	1	..	1	4
7. Necrencephalus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
8. Paralysis	3	2	....	3	1	1	1	1	3	..	..	..	1	..	..	..	..	..	1	1	1	..	1	1	..	..	..	1	..	2	..	..	..	1	..	5
Total	9	12	....	14	6	1	9	2	10	5	3	..	1	..	..	..	2	2	1	4	1	1	1	1	2	1	2	2	1	2	3	..	3	1	3	21
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Angina Pectoris	2	....	....	2	....	....	1	....	1	..	..	..	1	..	..	..	..	..	1	..	..	2	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
5. Valvular Diseases	4	2	....	4	2	....	2	....	4	..	1	..	..	..	..	3	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	1	2	1	1	6
6. Aneurism	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
7. Syncope	6	4	....	4	6	....	1	3	6	..	..	..	..	..	..	..	1	1	2	4	2	..	..	..	2	..	1	2	..	1	1	1	..	1	1	10
Total	13	6	....	11	8	....	4	3	12	..	1	..	1	..	..	3	..	2	2	2	6	2	..	..	3	1	1	3	..	1	1	2	2	3	2	19
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	2	....	3	1	....	1	2	1	1	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	..	..	..	..	..	..	2	1	4
2. Pneumonia	15	12	....	19	8	...	12	3	12	4	4	1	2	1	3	..	..	2	3	2	3	2	..	5	1	2	3	2	2	1	2	..	3	3	3	27
3. Pleurisy	1	....	....	1	....	..	...	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	18	14	....	23	9	....	13	5	14	5	4	1	2	1	3	..	1	2	3	3	4	3	..	5	1	2	4	2	2	1	2	..	3	5	5	32

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DEATHS BY COUNTIES IN 1894.—*Continued.*

DUFFERIN (Orangeville not included.)—POPULATION, 22,939.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	....	....	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	3
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	3	....	2	1	....	2	....	1	1	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	1	1	....	....	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Diphtheria and Croup (Cynanche Trachealis)	1	3	....	4	....	....	4	....	....	....	1	2	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	1	....	....	1	....	4
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	2	....	....	2	....	....	1	....	1	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	2
8. Scarlatina	1	1	....	2	....	....	2	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	2
9. Puerperal Fever	....	1	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
10. Influenza	2	4	....	2	4	....	1	3	2	....	....	....	....	....	....	1	....	1	....	1	3	....	....	1	1	....	1	....	....	....	....	....	....	....	3	6
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases....	9	12	....	16	5	....	13	4	4	5	2	3	2	..	1	1	..	2	..	2	3	..	..	2	2	1	1	..	..	1	2	3	2	1	6	21
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1
2. Anæmia	1	2	....	3	....	....	1	2	....	....	....	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	....	3
3. Anasarca	1	2	....	1	2	....	....	2	1	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	1	....	1	....	....	....	1	....	....	....	3
4. Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Carcinoma	4	1	....	2	3	....	....	1	4	....	....	....	....	....	....	....	....	1	3	....	1	....	....	....	2	....	....	....	1	....	1	....	1	....	....	5
6. Rheumatism and Gout	1	....	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1
8. Phthisis	6	9	....	14	1	....	3	6	6	....	1	....	....	....	....	4	1	3	5	....	1	....	....	....	2	2	1	....	2	....	1	....	1	2	4	15
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

DUFFERIN (Orangeville not included.)—POPULATION, 22,939.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Total	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Total Local Diseases	17	23	....	21	15	1	15	14	11	6	2	1	2	3	1	..	2	2	4	7	8	2	..	2	1	7	4	2	2	4	2	2	4	3	7	40
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	4	3	..	7	....	....	7	....	....	7	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	..	..	1	1	1	..	7
2. Diseases of Parturition	....	2	....	1	....	1	....	2	....	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	2
3. Diseases of Old Age	10	12	....	1	21	..	....	12	10	..	..	..	..	..	..	..	..	..	..	..	8	14	..	2	1	..	4	1	2	2	4	..	3	..	3	22
Total Developmental Dis's.	14	17	....	9	21	1	7	14	10	7	..	..	..	..	..	..	1	..	..	..	8	14	1	4	1	1	5	1	2	2	4	1	5	2	3	31
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	....	....	1	....	....	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Wounds and other Accidents	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	2	....	....	....	2	....	....	....	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
Cause not specified	8	4	....	11	1	....	7	1	4	4	..	..	..	2	1	..	1	..	2	2	..	..	..	3	1	..	..	1	2	1	..	2	1	..	1	12
Total from all causes	65	71	....	84		2	49	45	42	22	6	5	4	5	10	3	7	11	10	15	20	17	1	11	9	13	11	7	9	9	11	9	16	10	21	136

DEATHS BY COUNTIES IN 1894.—*Continued.*

ELGIN (St. Thomas and Aylmer not included.)—POPULATION, 44,733.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	2	..	6	....	....	6	....	....	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	..	..	6
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	1	1	....	1	1	...	1	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
4. Dysentaria Acuta	2	1	....	1	1	1	....	...	3	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	1	1	1	..	..	3
5. Diphtheria and Croup (Cynanche Trachealis)	....	5	....	5	....	....	4	....	1	..	2	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	2	..	..	1	..	..	..	5
6. Erysipelas	....	1	..	....	....	1	...	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	1	2	....	3	....	....	....	2	1	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	3
8. Scarlatina	....	1	....	....	1	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	4	3	....	3	4	....	1	3	3	1	..	..	..	..	..	..	..	1	2	1	2	..	..	2	2	..	1	..	..	..	..	..	..	2	..	7
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	1	..	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
13. Pyæmia	1	2	....	2	....	1	1	1	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	1	..	3
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	13	19	....	22	7	3	15	7	10	10	3	2	..	..	1	..	1	2	2	4	2	2	3	3	3	..	5	1	2	..	5	6	3	1	3	32
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	1	2	..	1	2	....	..	2	1	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	3
2. Anæmia	3	1	..	2	2	....	1	....	3	..	1	..	..	..	..	..	..	..	3	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	1	4
3. Anasarca	3	....	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	3
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	7	8	...	6	8	1	...	6	9	..	..	..	..	..	..	..	..	2	1	5	2	5	..	2	1	1	2	1	1	2	1	1	1	1	1	15
6. Rheumatism and Gout	....	2	....	2	....	....	1	1	....	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2
7. Hydrocephalus	....	2	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2
8. Phthisis	14	13	....	23	2	2	5	8	14	1	..	..	1	1	1	5	7	2	3	2	3	..	1	3	3	3	..	3	1	2	..	..	2	4	6	27
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

ELGIN (St. Thomas and Aylmer not included.)—POPULATION, 44,733.

Sex—Nativity - Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases	28	29	..	38	16	3	9	19	29	2	2	1	1	1	1	5	7	6	6	11	7	6	1	6	5	4	4	5	2	7	3	2	3	6	10	57
NERVOUS DISEASES.																																				
1. Apoplexy	5	2	....	7	....	....	....	1	6	..	..	..	..	..	..	1	..	2	..	2	2	..	..	2	1	..	..	..	..	..	2	1	..	1	7
2. Convulsions	1	5	....	6	..	....	6	....	....	6	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	2	2	..	..	6
3. Encephalitis	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Epilepsy	1	....	....	1	....	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
5. Insanity	1	....	....	....	1	....	..	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	.....
6. Meningitis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7 Necrencephalus	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	4	6	....	5	5	....	....	4	6	..	..	..	..	..	..	..	..	..	2	3	4	1	..	4	..	1	1	1	..	..	1	1	1	..	..	10
Total	12	14	....	19	7	....	7	6	13	6	..	..	..	..	..	1	..	2	3	5	8	1	..	7	1	1	1	1	1	1	6	4	..	2	26
DISEASES OF CIRCULATION.																																				
1. Endocarditis	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	2	1	....	....	3	....	....	....	3	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	1	1	1	..	..	..	..	..	..	..	3
5. Valvular Diseases	5	2	....	2	5	....	....	....	7	..	..	..	..	..	..	..	..	..	..	3	3	1	..	..	..	..	1	1	2	..	..	1	..	1	..	1	7
6 Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	3	....	1	2	1	....	2	2	..	..	..	..	..	..	..	..	..	1	3	..	..	..	..	2	..	..	..	..	..	..	1	..	1	..	4
Total	9	6	....	4	10	1	1	2	12	..	..	1	..	..	..	..	..	..	2	6	4	2	..	..	2	2	2	3	..	..	2	1	1	1	1	15
DISEASES OF RESPIRATION.																																				
1. Bronchitis	4	....	....	2	2	....	1	....	3	1	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	1	..	..	..	..	..	3	..	4
2. Pneumonia	11	5	....	8	7	1	4	2	10	3	..	..	..	..	..	..	2	1	..	1	4	3	2	6	..	3	2	2	..	..	..	1	..	1	1	16
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total	16	5	....	11	9	1	5	2	14	4	..	..	..	..	..	..	2	2	1	2	5	3	2	6	..	4	2	3	..	..	..	1	..	4	1	21

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DEATHS BY COUNTIES IN 1894.—*Continued.*

ESSEX (Windsor, Sandwich, Amherstburg, Essex Town and Walkerville not included).—POPULATION 57,283.

Sex—Nativity—Social condition -Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	17	11	..	28	..	..	28	..	..	24	4	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	8	12	5	..	..	28
2. Cholera Morbus	2	1	..	1	2	..	1	..	2	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	3
3. Diarrhœa Acuta	1	3	..	4	..	..	4	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	1	..	..	..	4
4. Dysentaria Acuta	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
5. Diphtheria and Croup (Cynanche Trachealis)	12	3	..	14	1	..	15	..	..	1	6	8	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	..	1	..	1	1	1	4	2	15
6. Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	2	4	..	5	1	..	3	1	2	..	1	1	1	1	..	1	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	2	2	..	6
8. Scarlatina	..	2	..	2	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2
9. Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	3	9	..	8	3	1	2	7	3	..	2	..	..	..	..	..	1	1	..	..	4	4	..	6	2	..	..	2	..	..	..	1	..	1	12
11. Morbilli	3	..	..	3	..	..	2	..	1	..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	3
12. Whooping Cough	1	1	..	1	..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	2
13. Pyæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	42	34	..	66	7	3	58	8	10	27	20	10	1	1	..	3	1	1	1	2	4	4	1	6	7	5	2	5	3	2	11	18	8	4	5	76
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	4	1	..	3	2	..	..	1	4	..	..	..	..	..	..	1	..	..	2	2	..	..	..	..	..	1	..	1	..	..	1	1	..	..	1	5
2. Anæmia	4	2	..	2	3	1	1	1	4	..	1	..	..	..	..	..	..	..	1	4	..	..	..	..	1	..	1	1	2	..	1	..	..	..	..	6
3. Anasarca	2	4	..	5	1	..	1	3	2	..	..	1	..	..	..	..	..	..	..	1	4	..	..	..	1	1	..	2	..	..	1	..	..	..	1	6
4. Asthma	1	1	..	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	2
5. Carcinoma	3	6	..	6	3	..	..	6	3	..	..	..	..	..	..	..	..	..	2	4	2	..	1	2	..	..	..	3	..	..	..	1	2	..	1	9
6. Rheumatism and Gout	2	1	..	2	1	..	..	..	3	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	3
7. Hydrocephalus	..	1	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
8. Phthisis	18	25	..	38	4	1	13	11	19	1	..	..	3	4	8	5	11	4	4	3	..	..	..	3	..	3	4	8	3	2	3	2	4	4	7	43
9. Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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DEATHS BY COUNTIES IN 1894.—*Continued.*

ESSEX (Windsor, Sandwich, Amherstburg, Essex Town and Walkerville not included).—POPULATION 57,283.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																		
1. Arthritis	....	....	....	....	....	..	....	....	....	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	.. .	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	69	53	....	98	23	1	56	17	49	19	18	4	6	3	7	3	10	6	5	17	16	7	1	16	8	21	20	6	12	3	7	3	9	3	14	122
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	39	26	....	65	....	....	65	....	....	65	..	..	..	..	.	..	..	..	..	..	..	..	..	6	1	9	9	9	..	4	7	9	3	5	3	65
2. Diseases of Parturition	....	3	....	3	....	....	....	3	....	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	3
3. Diseases of Old Age	29	23	....	33	19	....	....	18	34	..	..	..	..	..	..	..	..	..	..	..	17	35	..	4	7	6	3	3	4	4	4	5	5	3	4	52
Total Developmental Dis's.	68	52	.. .	101	19	....	65	21	34	65	..	..	..	..	1	1	1	..	..	..	17	35	..	10	9	15	13	12	4	8	11	14	9	8	7	120
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	1	....	1	....	...	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
2. Wounds and other Accidents	7	3	....	10	....	....	4	1	5	..	2	..	1	..	1	..	..	1	1	2	..	2	..	1	2	1	1	..	1	1	..	..	..	..	3	10
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
5. Drowning	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Total Violent Deaths	9	4	...	13	....	....	4	1	8	..	2	..	1	1	2	..	..	1	1	2	1	2	..	1	3	1	1	1	1	1	1	..	..	..	3	13
Cause not specified	7	11	....	16	1	1	14	1	3	5	7	1	..	2	..	..	..	..	1	..	..	..	2	2	1	3	1	4	..	2	..	1	1	1	2	18
Total from all causes	229	196	....	354	64	7	213	71	141	118	48	16	11	11	18	13	24	13	20	36	44	48	5	40	30	50	43	44	25	19	37	41	34	21	41	425

DEATHS BY COUNTIES IN 1894.—*Continued.*

FRONTENAC (Kingston and Portsmouth not included.)—POPULATION, 48,481.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	....	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	2
2. Cholera Morbus	....	1	....	1	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Dysentaria Acuta	1	1	....	1	1	....	1	....	1	..	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	2	....	....	2
5. Diphtheria and Croup (Cynanche Trachealis)	6	7	...	13	....	....	13	....	....	..	6	5	2	..	..	..	..	..	..	..	..	..	..	3	3	..	..	..	..	..	..	1	1	5	13
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	....	2	....	1	1	....	1	1	....	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2
8. Scarlatina	2	....	....	2	....	....	2	....	....	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	6	3	....	2	6	1	....	1	8	..	..	..	..	..	..	..	1	..	1	2	2	3	..	5	1	1	..	..	..	..	..	..	..	2	9
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	1	2	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	3
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	17	17	....	25	8	1	23	2	9	3	9	8	2	..	1	..	1	..	1	3	2	4	..	9	4	2	.	2	1	1	2	..	4	1	8	34
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	2	....	2	....	....	....	2	....	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
2. Anæmia	1	3	..	3	1	....	1	....	3	..	..	..	..	1	..	..	..	..	1	2	..	..	..	..	..	1	..	..	1	..	..	1	..	..	1	4
3. Anasarca	5	3	....	6	2	....	....	2	6	..	..	..	..	..	..	1	..	1	1	3	2	..	..	..	..	..	..	2	..	..	..	1	2	1	2	8
4. Asthma	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
5. Carcinoma	2	1	....	....	3	....	....	....	3	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	2	..	..	..	..	..	3
6. Rheumatism and Gout	..	2	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
7. Hydrocephalus	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2
8. Phthisis	18	11	....	26	3	....	9	3	17	1	..	2	2	3	3	3	7	1	3	3	..	..	1	2	..	4	2	2	.	1	4	5	4	1	4	29
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

FRONTENAC (Kingston and Portsmouth not included.)—POPULATION, 48,481.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20 25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	28	24	....	41	11	....	12	8	32	2	1	2	2	4	3	4	7	4	6	8	6	2	1	2	..	5	4	5	2	4	4	8	7	4	7	52
NERVOUS DISEASES.																																			
1. Apoplexy	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1
2. Convulsions	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	2
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Epilepsy	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	1	2	....	3	....	....	3	....	....	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	3
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	2	6	....	7	1	....	1	2	5	..	..	..	..	1	..	..	..	..	4	1	1	1	..	..	..	3	1	1	1	..	..	..	1	..	1	8
Total	4	10	....	13	1	....	6	3	5	2	2	1	..	1	..	..	..	..	4	1	1	2	..	1	..	3	2	2	3	1	..	..	1	..	1	14
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	5	5	....	9	1	....	....	3	7	..	..	..	..	..	..	..	2	2	..	4	2	..	..	1	1	1	..	..	2	1	.	1	1	..	2	10
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	2	2	....	3	....	1	1	....	3	..	..	..	1	..	..	..	..	..	..	2	..	..	1	1	..	.	1	..	..	..	2	..	..	..	..	4
Total	7	7	....	12	1	1	1	3	10	..	..	..	1	..	..	..	2	2	..	6	2	..	1	2	1	1	1	..	2	1	2	1	1	..	2	14
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	2	....	2	2	....	1	2	1	1	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	2	4
2. Pneumonia	12	10	....	11	10	1	8	2	12	2	2	1	..	1	2	..	3	1	1	5	3	..	..	4	3	3	2	3	1	..	..	..	2	1	3	22
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	14	12	....	13	12	1	9	4	13	3	2	1	..	1	2	..	3	1	3	6	3	1	..	4	3	3	2	3	1	1	..	..	2	2	5	26

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DEATHS BY COUNTIES IN 1894.—*Continued.*

GREY (Owen Sound and Meaford not included.)—POPULATION, 73,443.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	6	3	....	9	....	....	9	....	....	7	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	5	..	..	..	9
2. Cholera Morbus	4	1	....	5	....	....	5	....	....	..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	..	5
3. Diarrhœa Acuta	1	3	....	4	....	....	4	....	....	1	3	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	3	..	..	..	4
4. Dysentaria Acuta	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	9	4	....	12	1	....	13	....	....	3	4	3	3	..	..	..	..	..	..	..	..	..	..	1	..	1	2	1	1	..	1	..	1	..	5	13
6. Erysipelas	1	1	....	2	....	....	1	....	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2
7. Febris Typhoides	3	3	....	4	2	....	2	1	3	..	..	..	..	2	1	2	..	..	..	..	1	..	..	..	1	1	..	1	..	..	..	2	1	..	6
8. Scarlatina	7	2	....	9	....	....	9	....	....	..	5	3	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	1	..	..	..	1	4	9
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	8	16	....	9	15	....	3	9	12	2	..	..	1	..	..	..	2	..	2	4	8	5	..	12	5	1	1	1	..	..	..	..	1	1	2	24
11. Morbilli	1	1	....	1	....	1	2	....	....	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
12. Whooping Cough	6	2	....	8	....	....	8	....	....	8	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	3	1	..	1	1	..	8
13. Pyæmia	1	1	....	1	1	....	....	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	48	37	....	64	20	1	56	11	18	22	18	7	5	3	2	2	3	1	3	5	9	5	..	15	8	4	5	4	3	5	5	12	8	5	11	85
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	2	....	1	2	1	....	1	3	..	..	..	..	..	..	..	1	..	..	1	1	..	1	1	..	..	..	..	1	..	..	..	..	1	1	4
2. Anæmia	4	5	....	7	2	....	1	3	5	..	..	..	..	2	..	..	..	1	3	3	..	..	..	2	..	1	..	1	1	1	..	2	..	1	..	9
3. Anasarca	7	8	....	9	5	1	3	5	7	..	1	..	..	1	..	1	3	2	..	2	4	..	1	..	2	1	1	2	1	..	2	2	1	1	2	15
4. Asthma	2	2	....	1	3	....	....	2	2	..	..	..	..	..	..	..	..	..	..	2	1	1	..	1	..	..	..	1	..	..	..	..	..	..	2	4
5. Carcinoma	6	6	....	2	10	....	....	4	8	..	..	..	..	..	..	..	1	2	1	3	2	3	..	2	..	1	..	..	2	2	3	..	1	..	1	12
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	13	23	....	28	6	2	9	14	13	..	..	..	..	6	6	8	8	2	3	1	2	..	..	3	1	2	8	2	6	4	3	2	1	3	1	36
9. Tabes Mesenterica	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	2	1	....	2	1	..	1	....	2	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	3

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

GREY (Owen Sound and Meaford not included.)—POPULATION, 73,443.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20 25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	
DISEASES OF LOCOMOTION.																																		
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Local Diseases	89	80	....	97	71	1	69	34	66	24	16	5	3	7	11	5	13	10	16	25	24	10	..	26	25	12	13	13	13	2	17	15	13	9	11	169
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	24	12	....	36	....	....	36	....	....	36	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	6	4	5	4	1	2	2	3	2	2	36
2. Diseases of Parturition	....	5	....	4	1	....	....	5	....	..	..	..	..	..	..	1	3	1	..	..	..	..	..	..	..	..	2	..	..	2	..	..	..	1	..	5
3. Diseases of Old Age	40	27	....	5	59	3	....	26	41	..	..	..	..	..	..	..	..	..	..	..	27	40	..	9	3	7	8	3	3	3	2	3	8	9	9	67
Total Developmental Dis's.	64	44	....	45	60	3	36	31	41	36	..	..	..	..	..	1	3	1	..	.	27	40	..	10	7	13	14	8	7	6	4	5	11	12	11	108
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Wounds and other Accidents	12	2	....	7	7	....	3	....	11	1	..	..	..	1	..	2	3	1	1	1	3	..	1	..	4	..	..	..	1	..	1	1	2	3	2	14
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Drowning	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
6. Lightning	1	....	....	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Total Violent Deaths	13	3	....	8	8	....	4	1	11	1	..	..	..	1	1	2	3	1	1	1	4	..	1	..	4	1	..	..	1	1	1	1	2	3	2	16
Cause not specified	6	2	....	7	1	....	4	2	2	..	2	1	1	..	.	1	..	1	1	1	..	..	..	1	1	..	..	..	2	..	.	2	..	1	1	8
Total from all causes	257	213	....	272	189	9	183	108	179	83	37	14	9	21	20	21	35	21	29	44	74	59	3	61	48	35	41	32	37	21	35	41	38	37	41	470

DEATHS BY COUNTIES IN 1894 —*Continued.*

HALDIMAND (Dunnville not included.)—POPULATION, 24,172

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60 70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	5	2	....	7	....	....	7	....	....	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3	3	..	..	..	7
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	....	2	....	1	1	....	1	1	....	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	5	....	7	....	....	7	....	....	1	1	2	2	..	1	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	3	..	..	..	..	7
6. Erysipelas	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
7. Febris Typhoides	2	2	....	3	1	....	....	1	3	..	..	..	..	..	1	..	1	1	1	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	..	4
8. Scarlatina	....	2	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	3	6	....	4	4	1	....	5	4	..	..	..	..	..	1	..	..	..	1	1	3	3	..	3	1	1	1	..	..	1	..	..	..	1	1	9
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	12	20	....	24	7	1	17	8	7	6	6	2	2	..	3	..	1	1	3	2	3	3	..	5	3	1	3	2	1	3	6	5	..	1	2	32
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	1	....	4	....	....	1	....	3	..	..	1	..	..	..	1	..	..	1	1	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	4
2. Anæmia	....	2	....	2	....	....	1	1	....	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2
3. Anasarca	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	1	..	1	1	..	..	..	..	..	3
4. Asthma	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
5. Carcinoma	6	5	....	4	7	....	....	4	7	..	..	..	..	..	..	..	..	..	2	4	3	1	1	..	2	..	..	1	2	..	2	1	1	1	1	11
6. Rheumatism and Gout	2	1	....	3	..	....	2	....	1	..	..	1	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	3
7. Hydrocephalus	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Phthisis	10	12	....	17	4	1	6	6	10	..	2	..	..	..	3	8	4	..	1	3	1	..	..	..	2	3	2	4	2	..	1	1	2	1	4	22
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	1	....	....	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

HALDIMAND (Dunnville not included.)—POPULATION, 24,172.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	...	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	25	23	....	35	12	1	11	12	25	1	2	2	..	2	3	9	5	1	5	9	7	1	1	1	5	4	6	8	5	2	3	2	3	3	6	48
NERVOUS DISEASES.																																			
1. Apoplexy	2	....	....	2	....	....	....	...	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
2. Convulsions	4	3	....	7	....	....	6	1	....	3	3	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	1	..	..	2	2	..	..	..	..	7
3. Encephalitis	....	2	....	2	....	....	2	....	....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
4. Epilepsy	....	1	....	1	....	....	...	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Insanity	....	1	..	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
6. Meningitis	1	1	....	2	....	....	2	....	....	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
7. Necrencephalus	..	1	....	..	1	....	..	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Paralysis	7	4	....	10	1	....	1	4	6	..	..	..	..	1	..	..	2	2	4	1	1	..	..	1	2	1	1	1	..	2	..	1	..	2	..	11
Total....	14	13	....	24	3	....	11	8	8	4	4	1	1	1	..	..	..	3	4	7	1	1	..	4	3	3	3	2	2	4	2	2	..	2	..	27
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
4. Angina Pectoris	...	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Valvular Diseases	4	5	....	4	5	...	....	4	5	..	..	..	..	1	..	1	1	1	2	3	..	..	..	..	2	..	..	3	..	..	1	..	1	1	1	9
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	....	....	....	1	..	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total....	6	6	....	5	7	....	..	5	7	..	..	..	..	..	1	..	2	1	1	3	3	1	..	..	2	..	..	3	..	..	1	1	1	3	1	12
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	4	....	3	1	....	....	4	....	..	..	..	..	..	..	..	..	..	..	1	..	3	..	..	2	2	..	..	..	..	..	..	..	..	..	..	4
2. Pneumonia	8	6	....	9	5	....	5	1	8	2	1	..	1	..	..	2	2	2	1	1	..	2	..	3	1	2	..	5	1	2	..	..	..	..	..	..	14
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	1	....	1	....	....	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
Total....	8	11	....	13	6	....	6	5	8	2	1	..	2	..	..	2	2	2	1	2	..	5	..	4	3	4	..	5	1	2	..	..	..	..	..	..	19

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

HALTON (Oakville, Georgetown and Milton not included)—POPULATION, 22,668.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	....	....	1	....	....	1	..	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	1	2	....	3	....	....	3	....	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	3
4. Dysentaria Acuta	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Diphtheria and Croup (Cynanche Trachealis)	....	4	....	4	....	....	4	....	....	..	2	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2	4
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	2	1	....	2	1	....	1	1	1	1	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	1	3
8. Scarlatina	....	2	....	2	..	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2
9. Puerperal Fever	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
10. Influenza	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	..	..	..	..	..	..	..	..	..	2	3
11. Morbilli	1	....	....	1	....	....	1	....	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
12. Whooping Cough	1	3	....	4	....	....	4	....	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	1	4
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	8	14	..	20	2	....	16	3	3	7	6	2	..	..	1	1	1	..	..	1	2	1	..	5	..	1	2	..	..	2	..	2	3	1	6	22
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Anæmia	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Anasarca	2	....	....	1	1	....	1	....	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Carcinoma	2	2	....	2	2	....	....	2	2	..	..	..	..	..	..	..	..	..	3	..	..	1	..	..	1	..	..	1	..	..	1	..	..	..	1	4
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
8. Phthisis	2	4	....	4	2	....	....	4	2	..	..	..	..	..	..	..	2	3	..	1	..	..	..	1	..	..	1	..	1	..	..	..	..	3	..	6
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	1	1	....	2	....	....	1	1	....	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	2

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

HALTON (Oakville, Georgetown and Milton not included.)—POPULATION, 22,668.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	29	34	....	38	20	5	17	20	26	6	2	3	3	1	4	1	3	4	6	10	16	3	1	8	4	7	8	4	8	2	6	2	2	5	7	63
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	5	3	1	8	....	1	8	....	1	8	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	2	1	..	1	2	1	9
2. Diseases of Parturition	..	1	....	1	....	....	....	1	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
3. Diseases of Old Age	8	11	....	3	14	2	....	9	10	..	..	..	..	..	..	..	..	..	..	..	3	13	3	3	2	2	2	..	1	2	1	..	1	3	2	19
Total Developmental Dis's.	13	15	1	12	14	3	8	10	11	8	..	..	..	..	1	..	..	..	..	..	3	13	4	4	2	2	2	2	1	4	2	..	2	5	3	29
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	....	....	2	....	....	....	..	2	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	2
2. Wounds and other Accidents	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	..	..	..	..	..	..	1	1	..	..	..	3
3. Murder and Homicide	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Suicide	..	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowned	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Total Violent Deaths	4	2	....	3	3	....	....	2	4	..	..	..	..	1	1	1	..	..	1	..	1	1	2	..	..	..	..	1	..	1	1	..	..	1	6
Cause not specified	1	2	....	1	2	....	1	1	1	..	..	..	..	..	1	..	..	..	..	1	..	1	..	1	..	1	..	..	1	..	..	..	..	..	..	3
Total from all causes	65	74	1	85	46	9	45	43	52	23	8	6	3	1	7	5	8	7	10	13	23	19	7	23	8	11	13	9	12	8	10	5	8	14	19	140

DEATHS BY COUNTIES IN 1894.—*Continued.*

HASTINGS (Belleville, Deseronto and Trenton not included)—POPULATION, 60,933.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20	20 25.	25-30.	30-40.	40-50.	50-60.	60 70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	....	....	2	....	..	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	..	1	..	2
2. Cholera Morbus	1	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1
3. Diarrhœa Acuta	....	4	....	4	....	....	4	....	....	1	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	1	....	....	....	4
4. Dysentaria Acuta	1	....	....	....	1	..	....	..	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	1
5. Diphtheria and Croup (Cynanche Trachealis)	3	5	....	8	....	....	7	....	1	1	1	2	3	....	....	1	....	....	....	....	....	....	....	1	1	4	..	1	....	....	1	....	....	....	8
6. Erysipelas	1	1	....	2	....	....	....	1	1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	1	2
7. Febris Typhoides	3	1	..	4	....	....	2	....	2	....	1	1	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	1	1	1	1	..	4
8. Scarlatina	....	2	....	2	....	....	2	....	....	..	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	8	5	....	7	5	1	2	3	8	....	....	....	....	....	1	1	1	....	....	4	5	1	....	4	1	1	1	1	..	1	....	....	....	4	12
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12 Whooping Cough	....	2	....	2	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	2
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	19	20	....	31	7	1	21	4	14	6	6	4	3	..	1	1	3	2	..	4	7	2	..	5	3	6	2	2	1	4	5	1	2	1	7	39
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	4	....	4	1	....	1	2	2	..	....	..	1	..	..	..	1	1	..	1	1	....	....	....	....	....	1	..	3	....	....	1	....	....	....	5
2. Anæmia	1	1	....	2	....	....	2	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	2
3. Anasarca	3	1	....	3	1	....	....	1	3	1	....	....	....	....	....	....	....	....	....	2	1	....	....	....	1	....	1	..	1	....	1	....	....	....	....	4
4. Asthma	....	3	..	1	2	....	1	2	....	..	1	....	....	....	....	....	....	....	1	1	....	....	....	2	....	....	1	....	....	....	....	....	....	....	....	3
5. Carcinoma	4	5	....	7	2	....	1	2	6	....	....	....	....	....	....	....	3	....	2	3	1	....	....	....	....	....	....	1	1	1	4	1	....	1	9
6. Rheumatism and Gout	3	....	....	2	....	1	1	....	2	....	....	....	1	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	1	2	....	....	3
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Phthisis	12	19	....	27	2	2	8	10	13	1	1	2	1	1	3	4	6	5	1	3	2	..	1	4	5	3	4	..	1	2	2	2	4	2	2	31
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

DEATHS BY COUNTIES IN 1894.—*Continued.*

HASTINGS (Belleville, Deseronto and Trenton not included)—POPULATION, 60,933.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	24	33	....	46	8	3	14	17	26	3	3	2	3	1	3	4	7	9	3	9	8	1	1	6	6	3	6	1	6	3	4	9	8	2	3	57
NERVOUS DISEASES.																																			
1. Apoplexy	3	2	....	4	1	....	1	2	2	..	..	1	..	..	..	..	1	..	1	2	..	..	..	..	..	..	1	..	2	..	..	1	1	..	..	5
2. Convulsions	1	6	....	7	....	....	7	....	....	6	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	1	2	..	1	..	7
3. Encephalitis	2	2	....	4	....	....	4	....	....	1	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	2	..	..	..	..	..	..	..	4
4. Epilepsy	1	1	....	2	....	....	1	....	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2
5. Insanity	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
6. Meningitis	4	....	....	4	....	....	3	....	1	2	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	1	1	4
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	6	3	....	7	2	....	1	2	6	..	..	..	..	..	..	..	1	2	1	1	2	2	..	..	1	..	..	..	3	3	..	1	..	..	1	9
Total....	17	15	....	29	3	....	17	4	11	9	4	2	..	..	..	..	1	4	1	3	4	2	2	1	3	1	5	3	5	4	1	4	1	2	2	32
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	1	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	3	4	....	5	1	1	...	2	5	..	..	..	..	..	..	1	1	..	2	1	1	1	..	..	..	..	..	..	..	1	1	..	..	3	..	2	7
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	3
Total....	5	6	....	8	2	1	1	3	7	..	..	1	..	..	1	1	..	3	2	2	1	..	..	1	..	..	..	..	1	1	..	..	4	..	4	11
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	1	....	1	1	....	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
2. Pneumonia	21	17	....	30	7	1	8	10	20	2	2	2	2	..	..	1	4	3	5	6	5	4	2	4	6	8	4	6	2	3	1	..	2	2	..	38
3. Pleurisy	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total....	22	18	....	31	8	1	9	10	21	3	2	2	2	..	..	1	4	3	5	6	5	5	2	4	6	8	4	6	2	3	1	..	2	3	1	40

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DEATHS BY COUNTIES IN 1894.—*Continued.*

HURON (Exeter, Clinton, Goderich, Seaforth and Wingham not included).—POPULATION, 68,870.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	4	...	6	...	...	6	...	...	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	1	..	..	6
2. Cholera Morbus	1	2	..	2	1	...	...	2	1	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	2	1	..	..	3
3. Diarrhœa Acuta	2	3	..	5	...	...	5	...	...	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	2	..	..	5
4. Dysentaria Acuta	1	4	...	...	5	...	..	4	1	..	..	..	..	..	..	..	..	..	..	3	..	2	..	..	..	..	..	..	..	3	1	1	..	..	5
5. Diphtheria and Croup (Cynanche Trachealis)	2	5	...	7	...	...	7	...	..	1	2	4	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	3	1	..	..	..	..	7
6. Erysipelas	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	4	4	...	4	3	1	3	2	3	..	..	1	1	1	1	2	..	..	..	1	..	..	..	..	..	1	..	..	1	..	1	1	1	2	1	8
8. Scarlatina	2	2	...	4	...	...	4	...	...	..	2	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	..	..	4
9. Puerperal Fever	...	1	...	1	...	...	1	...	...	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
10. Influenza	5	5	...	6	3	1	3	3	4	1	..	..	..	1	1	1	..	..	..	2	1	2	1	5	3	1	..	..	..	..	..	..	..	..	..	10
11. Morbilli	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	3	2	...	5	...	...	5	...	...	3	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	1	..	1	5
13. Pyæmia	2	3	...	4	1	..	1	1	3	..	..	..	1	..	..	..	2	1	..	1	..	..	..	1	..	..	..	..	..	1	1	..	..	1	1	5
14. Variola	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	2	...	...	...	1	1	...	...	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	2
Total Zymotic Diseases	26	35	...	44	14	3	35	12	14	11	11	6	3	2	2	3	4	2	..	7	3	5	2	6	5	4	2	2	1	8	12	7	6	3	5	61
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	5	2		5	2	...	3	1	3	1	..	..	..	1	2	..	..	1	..	..	2	..	..	1	2	..	..	4	..	..	..	..	..	..	..	7
2. Anæmia	8	3	...	7	4	...	5	1	5	4	..	..	..	..	1	1	1	..	3	1	..	..	..	1	2	3	..	..	..	1	1	1	1	1	..	11
3. Anasarca	4	3	...	2	4	1	1	1	5	..	..	..	..	1	..	..	..	..	2	2	..	2	..	..	..	..	1	2	..	..	1	1	1	..	1	7
4. Asthma	2	1	...	...	3	...	...	..	3	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	..	..	..	..	1	..	..	1	3
5. Carcinoma	4	7	...	2	9	...	...	4	7	..	..	..	..	..	..	..	1	2	4	3	1	..	..	1	..	1	..	2	..	3	2	..	1	..	1	11
6. Rheumatism and Gout	1	2	...	2	1	...	1	1	1	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	3
7. Hydrocephalus	3	..	...	3	...	...	3	...	...	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	3
8. Phthisis	10	29	...	35	4	...	14	13	12	3	..	1	1	8	7	3	6	5	1	2	2	..	..	4	4	2	4	..	2	2	3	5	4	3	6	39
9. Tabes Mesenterica	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	1	1	...	...	2	...	...	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2

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DEATHS BY COUNTIES IN 1894.—*Continued.*

HURON (Exeter, Clinton, Goderich, Seaforth and Wingham not included).—POPULATION 68,870.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	6-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	.	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	...	....	....	....	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	78	68	....	77	62	7	47	37	62	19	8	7	3	4	4	9	13	7	14	21	23	8	6	11	16	19	12	13	10	10	12	17	9	5	12	146
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	8	12	1	21	...	...	21	....	....	21	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	3	2	2	1	1	2	3	2	1	21
2. Diseases of Parturition	....	6	....	4	1	1	....	6	....	..	..	..	..	..	..	2	1	3	..	..	..	..	..	..	1	..	2	1	..	..	1	..	1	..	..	6
3. Diseases of Old Age	46	29	....	....	73	2	..	19	56	..	..	..	..	..	..	..	..	..	..	..	38	36	1	13	9	4	5	4	3	3	7	8	3	6	10	75
Total Developmental Dis's.	54	47	1	25	74	3	21	25	56	21	..	..	..	..	2	1	3	..	..	..	38	36	1	14	12	5	10	7	5	4	9	10	7	8	11	102
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	11	1	....	8	4	...	3	....	9	..	..	..	..	1	2	2	2	1	2	2	..	..	..	..	1	..	..	1	1	1	1	3	1	1	2	12
3. Murder and Homicide	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Drowning	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Total Violent Deaths	12	2	....	10	4	....	4	....	10	..	1	..	..	1	2	2	2	2	2	2	..	..	..	..	1	..	..	2	1	2	1	3	1	1	2	14
Cause not specified	3	7	....	8	2	....	6	2	2	3	2	..	1	..	..	1	1	1	1	..	..	..	..	..	1	..	2	1	..	1	1	2	1	1	..	10
Total from all causes	211	209	1	220	187	14	140	98	183	63	24	14	8	18	19	20	31	21	24	43	74	53	9	39	44	35	33	35	21	31	43	47	32	22	39	421

DEATHS BY COUNTIES IN 1894.—*Continued.*

HALIBURTON.—Population, 6,545.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Diphtheria and Croup (Cynanche Trachealis)	6	4	....	9	....	1	7	....	3	..	1	3	2	1	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	3	..	3	4	10
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Puerperal Fever	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
10. Influenza	4	2	....	3	3	....	2	....	4	2	..	..	..	..	..	..	..	..	..	1	2	1	..	3	1	2	..	..	..	..	..	..	..	..	6
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	11	8	....	15	3	1	11	....	8	3	2	3	2	1	1	1	1	..	..	1	2	1	1	3	2	3	..	..	..	..	4	..	3	4	19
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Anæmia	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
3. Anasarca	1	2	....	1	2	....	....	....	3	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	1	..	..	1	..	1	..	3
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Rheumatism and Gout	1	....	....	....	1	....	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Phthisis	3	1	....	2	....	2	....	1	3	..	..	..	1	2	..	..	..	1	..	..	..	..	..	2	1	..	..	..	..	..	..	1	..	..	4
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

DEATHS BY COUNTIES IN 1894.—*Continued.*

HALIBURTON.—Population, 6,545.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases	7	3	....	4	4	2	....	1	9	..	..	..	..	1	2	..	..	1	3	1	1	1	..	2	1	..	..	2	..	..	1	..	2	1	1	10
NERVOUS DISEASES.																																			
1. Apoplexy	....	3	....	1	....	2	....	1	2	..	..	..	..	..	..	..	1	..	..	1	1	..	..	1	..	..	..	2	..	..	..	..	..	..	..	3
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	....	1	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Total	....	4	....	2	....	2	....	2	2	..	..	..	..	..	..	..	1	..	..	2	1	..	..	1	..	..	..	2	..	..	..	..	..	..	1	4
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	1	...	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	...	4	....	3	....	1	2	1	1	1	..	1	..	..	..	1	..	..	..	..	..	..	1	2	1	..	1	..	..	..	..	..	..	..	..	4
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	4	....	3	....	1	2	1	1	1	..	1	..	..	..	1	..	..	..	..	..	..	1	2	1	..	1	..	..	..	..	..	..	..	..	4

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DEATHS BY COUNTIES IN 1894.—*Continued.*

KENT (Chatham, Wallaceburg, Bothwell, Ridgetown and Dresden not included)—POPULATION, 60,535.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	6	5	....	11	....	....	11	..	....	10	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	3	6	..	..	1	11
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	2	3	....	5	....	....	5	....	....	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	1	..	5
4. Dysentaria Acuta	2	....	....	....	1	1	..	....	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	6	6	...	12	..	....	12	....	....	4	3	3	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	3	..	2	2	1	3	..	12
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	4	4	....	7	1	....	3	1	4	..	..	1	1	1	2	1	1	..	1	..	..	..	..	1	1	..	..	..	1	1	1	1	..	1	8
8. Scarlatina	1	1	....	2	....	....	2	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	2
9. Puerperal Fever	....	2	....	2	....	....	....	2	....	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
10. Influenza	5	4	....	1	5	....	2	1	6	1	1	..	..	..	..	..	..	..	1	..	2	4	..	2	1	1	..	1	..	..	..	..	..	4	9
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	3	3	....	6	....	....	5	1	....	1	3	1	..	..	1	..	..	..	..	..	..	..	..	..	2	3	..	..	1	..	..	..	..	..	..	6
13. Pyæmia	....	3	....	2	1	....	....	3	....	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	3
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	29	31	....	51	8	1	40	8	12	21	8	6	1	1	5	3	2	..	2	1	3	4	3	5	8	3	2	3	5	2	7	13	1	5	6	60
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	1	...	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	1	..	..	1	3
2. Anæmia	2	4	....	6	....	....	5	....	1	4	..	1	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	1	..	1	2	..	..	..	6
3. Anasarca	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	2	..	..	..	..	..	..	..	..	1	..	3
4. Asthma	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	..	..	1	2
5. Carcinoma	4	5	....	4	3	2	....	3	6	..	..	..	..	..	..	..	1	2	1	3	2	..	..	..	..	2	3	..	..	..	1	1	1	1	..	9
6. Rheumatism and Gout	1	2	....	2	1	....	....	....	3	..	..	..	..	..	1	..	..	..	..	..	1	1	..	1	..	..	1	..	..	..	..	..	1	..	..	3
7. Hydrocephalus	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
8. Phthisis	10	28	....	29	6	3	8	11	19	1	..	..	3	5	4	7	6	2	4	4	..	..	2	1	5	7	4	3	4	..	..	1	1	7	5	38
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1

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DEATHS BY COUNTIES IN 1894.—*Continued.*

KENT (Chatham, Wallaceburg, Bothwell, Ridgetown and Dresden not included)—POPULATION, 60,535.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																		
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	56	51	....	76	25	6	38	16	53	13	9	5	2	5	7	5	10	8	9	16	14	3	1	16	6	14	13	9	..	2	4	9	8	12	14	107
DEVELOPMENTAL DISEASES.																																				
1. Diseases of Pre-natal Period	15	11	....	26	....	....	26	....	....	26	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	2	..	1	..	2	3	6	1	3	1	26
2. Diseases of Parturition	..	6	....	5	..	1	....	6	....	..	..	..	..	..	1	..	5	..	..	..	..	..	..	1	..	1	1	2	..	..	..	..	..	..	1	6
3. Diseases of Old Age	15	14	....	10	16	3	1	5	23	..	..	..	..	..	..	..	..	..	..	..	13	15	1	3	4	4	5	2	1	2	1	2	2	1	2	29
Total Developmental Dis's.	30	31	....	41	16	4	27	11	23	26	..	..	..	..	1	..	5	..	..	..	13	15	1	10	5	7	6	5	1	4	4	8	3	4	4	61
VIOLENT DEATHS.																																				
1. Railroad Accidents	2	2	...	3	....	1	....	2	2	..	..	..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	3	..	1	..	..	4
2. Wounds and other Accidents	4	3	....	4	1	2	4	1	2	..	1	1	2	..	..	1	1	..	..	1	..	..	..	1	1	..	3	..	..	..	..	1	..	1	..	7
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
4. Suicide	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Drowning	2	1	....	3	....	....	2	....	1	..	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	3
Total Violent Deaths	9	6	....	11	1	3	6	3	6	..	2	2	2	..	3	1	1	1	2	1	..	..	..	1	1	..	4	..	..	1	4	1	1	2	15
Cause not specified	7	2	....	8	1	....	7	....	2	4	2	1	..	..	..	..	..	..	2	..	..	..	..	..	..	2	..	..	..	..	..	3	1	..	3	9
Total from all causes	154	164	....	235	64	19	132	55	131	69	21	15	8	12	21	17	25	14	20	29	35	23	9	35	28	36	33	21	11	9	22	40	17	30	36	318

DEATHS BY COUNTIES IN 1894.—*Continued.*

LAMBTON* (Sarnia, Petrolia, Forest and Point Edward not included.)—POPULATION, 56,643.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	2	....	6	....	....	6	....	....	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	1	..	..	6
2. Cholera Morbus	3	....	....	3	....	....	3	..	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	3
3. Diarrhœa Acuta	2	2	....	4	....	....	4	....	....	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	..	..	4
4. Dysentaria Acuta	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	4	2	....	5	1	..	5	....	1	1	..	2	1	1	1	..	..	..	..	..	..	..	..	..	3	..	..	..	1	..	..	..	2	..	6
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	2	....	1	2	....	....	....	3	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	1	1	..	3
8. Scarlatina	....	2	....	2	..	..	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	3	6	....	2	7	....	1	5	3	..	..	..	..	..	1	..	..	..	1	3	3	1	..	2	1	3	1	..	..	..	..	..	..	2	9
11. Morbilli	....	3	....	3	....	....	3	....	....	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	3
12. Whooping Cough	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	17	21	....	28	10	..	25	6	7	11	7	2	3	1	3	..	..	2	1	3	4	1	..	2	4	5	2	1	2	..	2	12	2	4	2	38
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	...	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Anæmia	2	3	....	3	1	1	...	3	2	..	..	..	..	1	2	..	..	..	1	1	..	..	..	..	1	..	..	..	2	1	..	..	..	..	1	5
3. Anasarca	3	1	..	3	1	....	....	1	3	..	..	..	..	..	..	..	..	1	..	2	1	..	..	..	..	2	..	..	..	..	..	..	1	..	1	4
4. Asthma	2	....	....	....	2	..	....	....	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
5. Carcinoma	6	12	....	11	6	1	2	7	9	..	..	..	..	..	..	1	1	5	5	3	3	..	..	3	2	2	3	2	1	2	1	1	..	1	18
6. Rheumatism and Gout	2	1	....	3	....	....	2	....	1	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	1	..	..	3
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	23	8	....	25	5	1	6	2	23	1	..	..	..	3	3	4	6	5	5	4	..	..	..	1	2	2	2	6	1	..	1	4	6	5	1	31
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

LAMBTON* (Sarnia, Petrolia, Forest and Point Edward not included.)—POPULATION, 56,643.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15 20.	20 25.	25-30.	30-40.	40 50.	50 60.	60 70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	1	1	....	....	1	1	....	1	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2
Total Constitut'l Diseases.	40	27	....	46	17	4	11	14	42	1	1	..	2	4	5	6	7	11	11	13	6	..	..	5	6	8	6	8	4	3	2	5	9	6	5	67
NERVOUS DISEASES.																																				
1. Apoplexy	2	4	....	3	3	....	....	4	2	..	..	..	..	..	..	1	..	..	1	4	..	..	..	..	1	..	..	1	1	1	..	..	1	1	..	6
2. Convulsions	8	4	....	12	....	....	12	....	....	11	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	1	1	..	..	1	1	3	.	2	12
3. Encephalitis	3	3	....	5	....	1	5	1	....	2	2	..	1	..	..	1	..	..	..	..	..	..	..	..	1	1	1	..	..	1	1	..	..	..	..	6
4. Epilepsy	....	1	....	1	....	...	1	...	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	1	2	....	2	....	1	3	....	....	..	1	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	3
7. Necrencephalus	....	1	....	....	1	....	....	1	...	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	3	11	....	5	9	....	1	8	5	..	..	..	..	..	..	..	..	3	4	2	5	..	..	..	2	1	2	1	1	3	..	1	1	1	1	14
Total....	17	26	....	28	13	2	22	14	7	13	4	2	1	..	..	1	2	..	3	6	6	5	..	3	5	4	4	3	3	5	2	2	6	2	4	43
DISEASES OF CIRCULATION.																																				
1. Endocarditis	....	1	....	....	....	1	....	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Angina Pectoris	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	8	3	....	4	4	3	1	2	8	..	..	..	..	1	..	1	1	..	1	3	2	1	1	1	..	2	..	..	1	..	1	1	..	1	4	11
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	2	1	....	2	1	....	1	1	1	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	3
Total....	11	5	....	6	6	4	2	3	11	..	..	..	1	1	..	1	1	1	2	4	2	1	2	2	..	3	1	..	1	..	2	1	1	1	4	16
DISEASES OF RESPIRATION.																																				
1. Bronchitis	3	2	....	2	2	1	1	1	3	.	1	..	..	..	..	..	..	1	1	1	..	1	1	..	..	1	1	.	..	..	..	..	..	2	5
2. Pneumonia	19	12	....	16	13	2	9	8	14	1	3	1	1	2	1	1	1	4	5	4	4	1	2	6	5	6	..	3	..	2	1	..	1	..	7	31
3. Pleurisy	3	1	....	4	....	....	1	1	2	..	..	..	..	1	..	1	..	1	..	1	..	..	..	..	..	1	..	.	2	..	..	..	1	..	..	4
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total....	25	15	....	22	15	3	11	10	19	1	4	1	1	3	1	2	1	5	6	6	5	1	3	7	5	7	1	4	2	2	1	..	2	..	9	40

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DEATHS BY COUNTIES IN 1894.

LANARK (Almonte, Carleton Place, Perth and Smith's Falls not included).—POPULATION, 38,905.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	1	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	3
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	4	1	....	4	1	....	4	....	1	1	1	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	2	..	..	5
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	....	....	2	....	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2
6. Erysipelas	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Scarlatina	2	1	....	3	....	....	3	....	....	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	3
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	8	4	....	6	6	....	2	2	8	1	..	..	1	..	1	..	..	..	1	2	3	3	..	5	3	..	2	..	..	..	..	..	..	..	2	12
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	20	8	....	21	7	....	16	2	10	5	4	4	2	..	2	1	..	..	1	2	3	4	..	5	5	1	4	1	2	..	..	5	2	..	3	28
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	....	1	....	....	....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Anæmia	1	1	....	1	1	....	1	....	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2
3. Anasarca	2	3	....	3	2	....	2	2	1	..	..	..	1	..	..	1	1	..	..	..	2	..	..	..	..	..	2	..	..	1	..	1	..	1	..	5
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	6	9	....	10	5	....	1	7	7	..	..	..	..	..	..	..	2	4	2	4	2	1	..	..	2	2	..	..	1	2	2	..	1	1	4	15
6. Rheumatism and Gout	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
7. Hydrocephalus	2	1	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	3
8. Phthisis	10	14	....	23	1	....	7	8	9	2	..	1	..	..	3	3	10	5	..	..	..	..	..	4	..	2	2	3	3	3	1	4	..	..	2	24
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	..	1	....	....	..	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1

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DEATHS BY COUNTIES IN 1894.—*Continued.*

LANARK (Almonte, Carleton Place, Perth and Smith's Falls not included).—POPULATION, 38,905.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20 25.	25-30.	30-40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	44	37	....	60	20	1	26	11	44	7	6	3	2	3	2	6	8	7	8	15	10	4	..	10	7	13	10	6	6	5	5	4	5	6	4	81
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	4	3	....	7	....	....	7	....	....	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	..	1	..	..	..	2	7
2. Diseases of Parturition	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diseases of Old Age	18	20	..	2	35	1	....	14	24	..	..	..	..	..	..	..	..	..	..	..	13	24	1	2	1	3	5	3	6	5	4	3	2	..	4	38
Total Developmental Dis's.	22	24	....	10	35	1	7	15	24	7	..	..	..	..	..	1	..	..	..	..	13	24	1	2	1	5	6	3	7	5	6	3	2	..	6	46
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	6	2	....	6	2	....	1	1	6	..	1	..	..	..	..	..	2	1	1	2	1	..	..	..	..	..	..	1	..	2	..	1	2	2	..	8
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Drowned	1	....	....	1	....	....	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Total Violent Deaths	8	2	....	7	2	1	1	1	8	..	1	..	..	1	.	.	2	1	1	2	1	..	1	.	.	..	.	1	.	3	..	2	2	2	.	10
Cause not specified	4	1	....	5	....	....	4	1	..	3	..	1	..	..	..	..	1	.	..	..	..	..	..	1	..	1	1	..	..	..	1	..	1	..	..	5
Total from all causes	120	102	...	115	74	3	68	48	106	26	11	9	4	5	8	10	21	19	13	21	29	35	2	22	15	25	26	14	21	19	15	20	15	11	19	222

DEATHS BY COUNTIES IN 1894.—*Continued.*

LEEDS AND GRENVILLE (Brockville, Prescott and Gananoque not included).—POPULATION, 62,792.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	1	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	3
2. Cholera Morbus	....	1	....	1	....	....	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. Diarrhœa Acuta	1	2	....	2	1	....	2	1	....	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2	..	..	..	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	1	1	....	2	....	...	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	....	1	....	..	1	....	....	1	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
8. Scarlatina	6	4	....	10	....	..	9	....	1	2	4	1	2	1	..	..	..	..	..	..	..	..	..	2	1	..	4	1	1	1	..	..	..	..	10
9. Puerperal Fever	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	8	9	....	10	7	....	2	7	8	1	..	..	..	1	1	..	..	1	1	2	5	5	..	7	3	..	1	..	..	2	..	..	..	..	4	17
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
13. Pyæmia	..	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	18	20	....	29	9	....	20	9	9	7	8	1	3	3	1	..	..	1	1	3	5	5	..	9	4	..	7	1	1	4	5	2	..	1	4	38
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	1	....	1	3	....	....	1	3	..	..	..	..	..	..	..	1	..	..	1	1	..	1	..	1	..	..	..	..	..	..	..	1	2	..	4
2. Anæmia	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2
3. Anasarca	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	2	5	...	6	1	....	....	5	2	..	..	..	..	..	..	..	..	2	1	1	1	1	1	1	..	..	..	1	..	2	..	1	1	..	1	7
6. Rheumatism and Gout	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1
7. Hydrocephalus	2	1	..	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	3
8. Phthisis	16	20	...	33	3	....	10	13	13	2	2	..	2	1	3	5	9	2	1	5	2	..	2	5	1	4	4	1	..	1	1	4	3	5	7	36
9. Tabes Mesenterica	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
10. Other Tubercular Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
11. Diabetes	....	1	...	1	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

LEEDS AND GRENVILLE (Brockville, Prescott and Gananoque not included).—POPULATION, 62,792.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	26	32	....	48	10	....	13	24	21	5	2	..	2	1	3	6	12	4	2	9	6	2	4	8	2	6	4	4	..	3	1	6	6	7	11	58
NERVOUS DISEASES.																																			
1. Apoplexy	3	2	....	4	1	....	1	1	3	..	..	..	..	..	1	..	..	..	1	1	2	..	..	1	..	2	..	..	..	..	1	..	..	..	1	5
2. Convulsions	....	1	....	1	...	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
3. Encephalitis	1	4	....	5	....	....	5	....	....	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	1	5
4. Epilepsy	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Insanity	...	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	...	1	....	1	...	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
8. Paralysis	5	10	....	9	6	....	1	7	7	..	..	..	..	..	..	1	..	1	1	7	5	..	..	2	3	2	3	..	2	..	..	1	2	..	15
Total	9	19	....	21	7	...	9	9	10	4	1	1	..	..	1	..	2	1	2	2	9	5	..	1	2	5	2	3	..	3	3	3	1	4	1	28
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
4. Angina Pectoris	...	1	....	1	...	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
5. Valvular Diseases	3	5	....	5	3	....	2	3	3	..	..	..	..	1	..	..	..	1	2	1	2	1	..	..	1	..	1	..	..	..	..	1	2	1	2	8
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total	3	7	....	7	3	....	2	5	3	..	..	..	..	1	..	..	1	2	2	1	2	1	..	..	1	..	1	..	..	..	..	1	2	2	3	10
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	2	....	2	1	....	1	2	...	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	3
2. Pneumonia	10	7	..	14	3	....	10	2	5	6	1	..	1	2	1	..	1	..	1	2	2	..	..	1	3	3	..	..	1	1	..	2	3	..	3	17
3. Pleurisy	2	....	....	1	1	....	...	....	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	13	9	....	17	5	....	11	4	7	7	1	..	1	2	1	1	1	..	2	3	3	..	..	1	3	5	1	..	1	1	..	2	3	1	4	22

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DEATHS BY COUNTIES IN 1894.—*Continued.*

LENNOX AND ADDINGTON (Napanee not included).—POPULATION, 25,523.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	..	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	3	....	5	...	....	4	....	1	1	..	2	1	..	..	..	1	..	..	..	..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	5
6. Erysipelas	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	4	5	....	7	1	1	...	5	4	1	..	..	..	..	..	1	..	1	..	2	4	..	..	4	1	1	1	..	..	..	..	..	..	2	9
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	1	....	....	1	...	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
13. Pyæmia	2	....	....	2	....	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15 Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	11	9	.	18	1	1	8	5	7	4	1	3	1	..	..	1	1	1	..	3	5	..	..	6	5	1	1	..	2	1	..	1	..	3	20
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	3	....	2	1	....	1	1	1	..	1	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	3
2. Anæmia	2	1	....	1	2	....	....	....	3	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	3
3. Anasarca	1	4	....	2	3	....	....	2	3	..	..	..	..	..	..	..	1	..	1	1	2	..	..	2	..	1	..	..	..	..	2	..	..	..	..	5
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	1	3	....	3	....	1	....	1	3	..	..	..	..	..	..	..	..	..	3	1	..	..	..	..	..	1	..	1	..	..	1	..	..	1	..	4
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
8. Phthisis	9	15	....	18	4	2	3	4	17	1	1	..	..	1	2	5	5	3	1	3	1	..	1	2	5	..	1	2	1	2	1	2	2	1	5	24
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1

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DEATHS BY COUNTIES IN 1894.—*Continued.*

LENNOX AND ADDINGTON (Napanee not included).—POPULATION, 25,523.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	... ..
Total Local Diseases	27	31	....	40	16	2	10	16	32	4	4	2	1	1	..	1	5	5	11	11	9	1	3	4	6	6	6	3	8	2	6	2	4	2	9	58
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	7	4	....	11	....	....	11	....	....	11	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	1	2	1	..	1	..	..	1	11
2. Diseases of Parturition	....	4	....	4	....	....	...	4	....	..	..	..	..	..	..	1	2	..	..	..	..	..	1	1	..	..	1	..	..	..	1	..	..	1	..	4
3. Diseases of Old Age	20	16	....	13	18	5	...	5	31	..	..	..	..	..	..	..	..	..	..	..	17	18	1	3	3	7	2	4	1	3	2	6	1	1	3	36
Total Developmental Dis's.	27	24	....	28	18	5	11	9	31	11	..	..	..	..	..	1	2	..	..	..	17	18	2	5	4	9	4	5	3	5	2	7	1	2	4	51
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Wounds and other Accidents	5	1	....	5	1	....	2	1	3	..	..	..	2	..	1	..	..	..	1	..	..	2	..	..	1	..	..	..	1	..	1	..	..	1	2	6
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	...	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
5. Drowning	3	....	....	3	....	....	....	....	3	..	..	..	..	..	..	1	..	1	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	3
Total Violent Deaths	9	1	...	9	1	....	2	1	7	..	..	..	2	..	2	1	..	1	2	..	..	2	..	2	1	..	..	..	1	..	1	1	..	1	3	10
Cause not specified	4	7	....	10	1	....	5	1	5	2	3	..	..	1	..	..	4	1	..	..	..	..	..	1	3	3	1	..	..	..	2	..	..	..	1	11
Total from all causes	92	99	...	133	47	11	41	41	109	22	11	5	5	3	4	9	19	12	18	21	35	21	6	23	24	21	13	11	15	11	16	16	8	7	26	191

DEATHS BY COUNTIES IN 1894.—*Continued.*

LINCOLN (St. Catharines and Merritton not included).—POPULATION, 31,020.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	5	2	....	7	....	....	7	....	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	5	....	....	....	7
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Dysentaria Acuta	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1
5. Diphtheria and Croup (Cynanche Trachealis)	8	1	....	8	1	....	9	....	....	2	3	4	....	....	....	....	....	....	....	....	....	....	....	....	....	2	1	....	....	....	....	2	1	3	9
6. Erysipelas	1	1	....	2	....	....	....	1	1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	2	....	....	....	....	2
7. Febris Typhoides	4	3	....	5	2	....	1	3	3	....	....	....	1	1	....	1	2	....	....	1	....	1	....	....	1	1	....	....	1	1	....	2	1	....	7
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	....	1	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
10. Influenza	6	3	....	5	3	1	3	2	4	2	....	1	....	....	....	....	1	....	2	3	....	....	....	2	2	1	2	....	....	....	....	....	1	1	9
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	4	2	....	6	....	....	6	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	1	3	....	....	....	6
13. Pyæmia	2	....	..	1	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	1	1	....	....	....	....	....	....	2
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	30	14	....	35	8	1	26	8	10	17	3	5	1	1	1	1	3	2	2	4	3	..	1	2	3	5	3	2	1	3	8	5	4	4	44
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	1	....	1	1	....	....	1	1	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	2	....	....	....	....	2
2. Anæmia	1	2	....	2	1	....	1	1	1	....	....	....	....	....	....	1	1	....	....	1	....	....	....	....	1	....	....	1	....	....	1	....	....	....	3
3. Anasarca	2	2	....	2	2	....	....	2	2	....	....	....	....	....	....	....	....	....	....	2	1	1	....	....	....	1	....	....	....	....	....	1	....	2	....	4
4. Asthma	....	1	..	1	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
5. Carcinoma	2	....	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	2
6. Rheumatism and Gout	....	1	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Phthisis	14	11	....	17	7	1	3	9	13	....	1	..	1	2	2	6	7	..	3	1	2	..	....	2	1	5	3	2	3	1	1	2	1	3	1	25
9. Tabes Mesenterica	....	2	....	2	....	....	1	....	1	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	2
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	....	2	....	2	....	....	....	2	....	....	....	....	....	....	....	....	1	..	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	2

DEATHS BY COUNTIES IN 1894.—*Continued.*

LINCOLN (St. Catharines and Merritton not included).—POPULATION, 31,020.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-35.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	20	22	....	27	13	2	5	16	21	1	1	..	1	2	3	7	8	3	5	7	3	1	..	3	2	6	3	4	4	3	2	5	1	5	4	42
NERVOUS DISEASES.																																			
1. Apoplexy	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1
2. Convulsions	2	1	....	3	....	....	3	....	....	2	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	3
3. Encephalitis	4	2	....	6	....	....	5	....	1	2	2	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	3	..	2	..	..	6
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
6. Meningitis	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
7. Necrencephalus	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
8. Paralysis	4	9	....	7	6	....	....	8	5	..	..	..	..	..	..	..	..	..	4	3	6	..	..	2	..	1	2	..	1	1	..	2	..	1	3	13
Total	13	13	....	19	7	....	9	9	8	4	2	1	2	..	..	..	..	..	5	3	9	..	..	5	..	1	3	..	2	1	4	2	2	2	4	26
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	5	3	....	6	2	....	....	2	6	..	..	..	..	..	..	..	..	..	1	6	1	..	..	2	1	1	1	1	1	..	..	1	..	..	..	8
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	3	3	....	3	3	....	3	1	2	..	..	..	..	..	..	..	..	1	3	1	1	..	..	2	..	..	..	2	..	1	..	..	..	..	1	6
Total	8	6	....	9	5	....	3	3	8	..	..	..	..	..	..	..	..	1	4	7	2	..	..	4	1	1	1	3	1	1	..	1	..	..	1	14
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	1	....	2	1	....	2	....	1	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	1	..	..	..	..	..	..	3
2. Pneumonia	5	3	....	6	2	....	2	2	4	..	2	..	..	..	..	..	..	1	..	..	4	1	..	2	..	..	1	..	..	..	1	2	1	..	1	8
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	7	4	....	8	3	....	4	2	5	1	3	..	..	..	..	..	..	1	..	..	5	1	..	2	2	..	1	..	1	..	1	2	1	..	1	11

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

MIDDLESEX (London City, Strathroy and London West not included).—POPULATION, 105,169.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	5	....	8	....	....	8	....	....	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	5	..	..	..	8
2. Cholera Morbus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. Diarrhœa Acuta	3	1	....	4	....	....	4	....	....	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	4
4. Dysentaria Acuta	1	3	....	3	....	1	3	1	..	1	1	..	1	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	1	1	..	..	4
5. Diphtheria and Croup (Cynanche Trachealis)	11	6	....	17	....	....	17	....	....	1	3	7	3	..	..	1	2	..	..	..	..	..	..	2	6	..	..	1	..	..	3	1	..	3	1	17
6. Erysipelas	2	2	....	3	1	....	1	1	2	..	..	..	..	..	1	1	..	..	1	1	..	..	..	..	..	3	..	..	..	..	..	..	..	1	..	4
7. Febris Typhoides	2	3	....	4	1	....	2	2	1	..	..	1	..	1	..	..	1	1	..	1	..	..	..	..	..	1	..	..	1	..	..	..	1	2	..	5
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	1	....	....	....	1	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1
10. Influenza	18	21	....	19	19	1	6	11	22	2	..	..	..	1	1	..	4	..	2	1	12	15	1	19	5	2	2	1	..	1	..	1	..	1	7	39
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
13. Pyæmia	1	1	....	1	1	....	1	....	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	42	45	....	61	23	3	44	16	27	12	10	8	4	2	2	3	7	1	3	3	14	16	2	22	11	9	3	3	2	2	6	12	2	7	8	87
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	2	2	....	3	1	....	2	1	1	1	..	..	1	..	..	1	..	1	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	1	..	4
2. Anæmia	2	6	..	7	1	....	4	4	....	..	2	..	1	..	..	..	..	2	..	3	..	..	..	..	..	1	..	2	..	4	..	..	..	1	8
3. Anasarca	3	4	....	3	3	1	....	4	3	..	..	..	..	..	..	..	..	1	1	1	3	..	1	2	1	..	..	..	..	..	2	..	1	..	1	7
4. Asthma	....	2	....	1	1	....	1	1	....	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
5. Carcinoma	9	9	....	11	6	1	1	8	9	..	..	1	..	..	..	..	1	4	3	7	1	1	..	2	2	1	..	..	2	1	1	1	3	2	3	18
6. Rheumatism and Gout	2	1	....	1	2	....	2	....	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	1	..	..	..	..	3
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	26	30	....	39	17	....	14	15	27	2	1	..	2	6	7	2	17	7	11	1	..	..	..	2	5	6	1	5	8	4	5	6	6	2	6	56
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

MIDDLESEX (London City, Strathroy and London West not included).—POPULATION, 105,169.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30 40.	40 50.	50-60.	60-70	70 80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total	1	....	...	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total Local Diseases	118	101	....	133	83	3	58	62	99	21	13	5	8	6	3	8	15	26	19	22	52	18	3	24	26	15	21	14	15	9	13	17	28	11	26	219
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	14	9	....	23	....	....	23	....	....	23	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	5	4	5	..	1	1	2	..	.	..	23
2. Diseases of Parturition	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2
3. Diseases of Old Age	35	36	....	7	63	1	....	32	39	..	..	..	..	..	..	..	..	..	..	..	30	40	1	6	6	6	10	4	5	2	8	3	10	4	7	71
Total Developmental Dis's.	49	47	....	31	64	1	23	34	39	23	..	..	..	..	1	..	..	1	..	..	30	40	1	8	10	11	14	10	5	3	9	5	10	4	7	96
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	1	....	1	2	....	....	1	2	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	3
2. Wounds and other Accidents	4	2	....	6	....	....	4	....	2	..	2	..	1	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	1	5	..	..	..	..	..	6
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	3	....	....	3	....	....	....	....	3	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	2	..	..	..	1	..	..	..	..	3
5. Drowning	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total Violent Deaths	9	4	....	11	2	....	5	1	7	..	3	..	1	..	2	2	2	1	..	1	1	..	..	..	..	1	3	..	2	5	2	..	..	..	..	13
Cause not specified	5	2	....	4	2	1	1	2	4	..	1	..	..	..	..	1	..	2	2	..	1	..	..	1	3	1	..	..	..	..	1	..	..	..	1	7
Total from all causes	268	253	....	306	205	10	155	149	217	59	30	14	17	15	15	19	42	47	39	38	104	75	7	61	59	46	43	35	34	29	41	42	50	28	53	521

DEATHS BY COUNTIES IN 1894.—*Continued.*

MUSKOKA AND PARRY SOUND (Huntsville and Parry Sound not included).—Population, 54,033.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10 15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60	60-70.	70 80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	3	..	5	....	....	5	....	....	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	..	1	..	5
2. Cholera Morbus	1	1	....	1	1	....	1	....	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Dysentaria Acuta	....	2	....	....	1	1	....	2	....	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	9	12	....	20	....	1	21	....	....	1	15	4	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	7	5	5	21
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	5	....	5	1	....	2	2	2	..	..	..	..	2	..	1	2	1	..	..	..	..	..	..	..	..	..	..	2	1	..	..	2	..	1	6
8. Scarlatina	3	....	....	3	....	....	3	....	....	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	3
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	4	9	....	8	2	3	8	4	1	3	..	3	..	2	1	..	..	..	1	3	..	..	..	6	1	2	1	2	..	..	..	1	..	..	..	13
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	4	3	....	7	....	....	7	....	....	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	2	..	1	..	..	7
13. Pyæmia	4	....	....	2	2	....	1	....	3	..	1	..	..	..	..	..	1	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	1	..	1	4
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total Zymotic Diseases	29	35	....	52	7	5	48	8	8	13	22	8	1	4	1	1	5	1	2	5	..	1	..	6	1	4	2	6	6	2	6	4	13	7	7	64
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	2	....	2	....	1	..	2	1	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	3
2. Anæmia	2	3	....	3	2	....	2	....	3	1	1	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	..	1	..	3	..	..	1	..	5
3. Anasarca	1	2	....	2	1	....	1	1	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	1	..	1	3
4. Asthma	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
5. Carcinoma	3	3	....	....	5	1	....	2	4	..	..	..	..	..	..	..	..	1	3	2	..	..	..	1	..	1	..	..	1	..	1	1	1	..	..	6
6. Rheumatism and Gout	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
7. Hydrocephalus	3	....	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	3
8. Phthisis	10	15	....	18	6	1	10	5	10	3	1	..	1	6	3	2	6	1	1	1	..	..	..	1	5	3	4	3	3	..	..	1	1	2	2	25
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY COUNTIES IN 1894.—*Continued.*

MUSKOKA AND PARRY SOUND (Huntsville and Parry Sound not included).– POPULATION, 54,033.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	21	26	.. .	29	15	3	16	11	20	7	3	..	1	6	4	2	7	3	4	8	2	..	..	2	7	5	6	3	5	..	6	3	3	3	4	47
NERVOUS DISEASES.																																			
1. Apoplexy	3	1	....	2	2	....	....	1	3	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	1	..	..	1	..	1	1	..	..	..	4
2. Convulsions	10	8	....	16	1	1	15	1	2	13	2	..	..	..	..	..	..	..	1	..	..	2	..	3	..	4	1	2	1	1	1	1	2	1	1	18
3. Encephalitis	2	2	....	4	....	....	2	1	1	1	1	..	..	..	..	1	..	..	1	..	..	..	..	..	2	1	..	1	..	..	..	..	..	..	..	4
4. Epilepsy	3	2	....	1	2	2	1	1	3	..	..	..	..	..	..	2	2	..	..	1	..	..	..	..	1	..	..	2	..	..	1	..	..	1	..	5
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	4	5	....	6	2	1	7	1	1	2	3	..	3	..	..	..	1	..	..	..	..	..	..	1	..	..	2	1	1	..	1	1	1	..	1	9
7. Necrencephalus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	2	4	....	3	3	....	1	3	2	..	..	..	..	1	..	..	..	1	..	4	..	..	..	1	1	..	..	..	1	1	..	..	..	..	2	6
Total....	25	22	....	32	11	4	26	8	13	16	6	..	3	1	.	4	3	2	1	8	1	..	2	6	4	6	3	6	4	2	4	3	3	2	4	47
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.. .
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	5	4	....	4	4	1	2	1	6	..	..	..	1	1	..	..	1	1	2	1	2	..	..	1	1	..	..	2	1	2	..	..	1	..	1	9
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total....	5	5	....	4	5	1	2	2	6	..	..	..	1	1	..	..	1	1	2	2	2	..	..	1	1	1	..	2	1	2	..	..	1	..	1	10
DISEASES OF RESPIRATION.																																			
1. Bronchitis	8	6	....	13	1	...	12	....	2	9	3	..	..	..	..	..	..	..	2	..	..	..	..	2	..	5	4	1	..	1	..	..	1	..	..	14
2. Pneumonia	10	7	....	12	1	4	8	2	7	8	1	..	1	1	..	..	..	1	..	1	2	2	..	1	2	1	4	4	2	1	..	..	..	1	1	17
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	2	....	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2
Total....	20	13	....	27	2	4	22	2	9	18	5	..	1	1	..	..	..	..	1	2	1	2	2	3	2	6	8	5	2	2	..	..	2	1	2	33

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DEATHS BY COUNTIES IN 1894.—*Continued.*

NORFOLK (Simcoe Town and Port Dover not included).—POPULATION 31,960.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	2	...	3	1	....	4	....	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	1	4
2. Cholera Morbus	1	....	....	1	....	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. Diarrhœa Acuta	2	1	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	3
4. Dysentaria Acuta	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	1	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	1	1	....	2	....	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2
6. Erysipelas	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	6	1	....	5	2	....	3	....	4	..	..	..	..	2	1	1	1	2	..	..	..	..	..	..	..	1	..	..	..	1	..	1	2	2	..	7
8. Scarlatina	1	3	....	4	....	....	4	....	....	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	1	..	..	..	..	..	..	4
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	5	4	....	7	2	....	1	3	5	..	1	..	..	..	1	..	..	..	1	..	3	3	..	..	5	1	1	..	..	..	..	..	..	..	2	9
11. Morbilli	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
12. Whooping Cough	1	3	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	1	4
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	20	18	...	31	7	....	23	6	9	8	8	3	..	2	2	1	1	2	1	3	3	4	..	8	1	4	3	3	1	1	4	4	3	2	4	38
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Anæmia	3	1	....	2	2	....	..	1	3	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	1	..	..	..	..	..	..	..	3	..	..	4
3. Anasarca	1	3	....	2	2	....	....	3	1	..	..	..	..	..	..	..	..	..	1	..	3	..	..	..	1	..	1	..	..	..	..	..	1	1	..	4
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	2	3	....	4	1	....	....	3	2	..	..	..	..	..	..	..	..	..	3	2	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	1	5
6. Rheumatism and Gout	2	....	....	1	1	....	1	....	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
7. Hydrocephalus	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
8. Phthisis	4	8	....	12	....	....	3	3	6	..	..	..	..	3	2	4	..	1	1	1	..	..	..	1	1	2	3	1	1	1	..	..	1	..	1	12
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

NORFOLK (Simcoe Town and Port Dover not included).—POPULATION 31,960.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	43	32	....	52	22	1	19	19	37	13	2	..	2	1	3	..	4	2	5	18	18	6	1	8	5	6	5	8	8	4	4	8	8	5	6	75
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	6	12	...	18	....	....	18	....	....	18	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	2	2	..	..	2	1	3	2	1	18
2. Diseases of Parturition	....	7	....	7	....	....	....	7	....	..	..	..	..	..	..	..	1	6	..	..	..	..	..	1	2	1	..	1	..	..	..	..	..	..	2	7
3. Diseases of Old Age	15	11	....	11	14	1	1	7	18	..	..	..	..	..	..	..	..	..	..	..	9	17	..	..	1	3	1	3	2	2	1	..	6	5	2	26
Total Developmental Dis's.	21	30	....	36	14	1	19	14	18	18	..	..	..	..	..	1	6	..	..	..	9	17	..	3	6	4	3	6	2	2	3	1	9	7	5	51
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	....	....	1	1	....	1	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
2. Wounds and other Accidents	2	....	....	2	....	....	1	....	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	2	....	....	2	....	....	1	....	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2
Total Violent Deaths	6	...	....	5	1	....	3	....	3	..	..	2	..	..	1	..	..	..	2	1	..	..	..	1	1	..	2	..	1	1	..	..	..	..	..	6
Cause not specified	3	1	....	4	....	....	3	1	....	1	2	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	....	..	..	..	..	1	..	1	4
Total from all causes	108	99	....	155	50	2	74	52	81	43	12	5	3	6	8	6	12	5	14	29	36	27	1	21	18	18	17	20	13	11	11	15	27	18	18	207

DEATHS BY COUNTIES IN 1894.—*Continued.*

NORTHUMBERLAND AND DURHAM (Cobourg, Bowmanville, Port Hope and Campbellford not included).—POPULATION, 72,667.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	7	2	....	9	....	....	9	....	....	7	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	3	2	2	1	..	1	9
2. Cholera Morbus	1	4	....	4	1	....	3	1	1	1	2	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	3	..	2	..	..	..	5
3. Diarrhœa Acuta	5	3	..	8	....	....	8	....	....	5	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	3	1	..	1	8
4. Dysentaria Acuta	....	1	....	1	....	...	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	9	13	....	22	....	....	22	....	....	1	7	10	3	1	..	..	..	..	..	..	..	..	..	..	..	1	7	4	..	..	3	2	2	1	..	22
6. Erysipelas	2	1	....	1	2	....	....	1	2	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	3	..	..	..	..	..	..	..	..	..	..	3
7. Febris Typhoides	3	8	....	10	1	....	7	2	2	..	1	..	3	2	1	1	..	..	2	1	..	..	..	2	1	1	1	1	1	1	1	..	1	..	1	11
8. Scarlatina	8	6	....	14	..	....	13	....	1	..	8	5	..	1	..	..	..	..	..	..	..	..	..	1	1	3	4	1	1	1	..	..	..	2	..	14
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	12	16	....	13	13	2	3	8	17	1	..	..	..	..	..	2	1	..	4	3	7	8	2	12	2	3	4	..	1	..	1	1	1	..	3	28
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	4	1	....	4	1	....	2	....	3	1	..	..	1	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	2	1	..	..	5
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2
Total Zymotic Diseases	53	55	....	87	19	2	67	13	28	16	21	16	7	4	2	3	4	1	8	6	9	8	3	15	7	8	16	7	4	9	11	12	7	4	8	108
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	4	....	7	....	....	3	2	2	..	..	..	1	..	2	1	1	1	..	..	1	..	..	..	..	2	1	..	..	..	..	..	2	2	..	7
2. Anæmia	....	7	....	6	1	....	....	7	....	..	..	..	..	..	..	1	2	..	2	2	..	..	..	..	1	1	..	1	2	..	..	..	..	2	..	..	7
3. Anasarca	6	9	....	5	9	....	....	7	8	..	..	..	..	..	..	..	1	..	1	6	4	3	..	3	1	..	3	..	4	1	1	..	..	1	1	15
4. Asthma	1	2	....	2	1	....	....	....	3	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	..	1	..	..	..	..	1	..	..	..	3
5. Carcinoma	6	12	....	14	4	....	....	11	7	..	..	..	..	..	..	..	1	1	5	3	5	2	1	..	2	1	1	..	4	2	1	..	1	3	3	18
6. Rheumatism and Gout	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	6	....	6	....	....	6	....	....	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	1	1	..	6
8. Phthisis	25	29	....	43	11	....	17	10	27	2	1	..	1	6	10	7	13	7	1	6	..	..	..	3	2	7	2	12	4	2	6	4	4	5	3	54
9. Tabes Mesenterica	1	2	....	2	....	1	....	2	1	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	2	1	..	..	..	..	..	3
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	5	2	..	5	2	....	....	2	5	..	..	..	..	..	..	..	1	3	..	1	2	..	..	2	..	..	..	..	..	1	..	1	..	3	..	7

DEATHS BY COUNTIES IN 1894.—*Continued*

NORTHUMBERLAND AND DURHAM (Cobourg, Bowmanville, Port Hope and Campbellford not included).—POPULATION, 72,667.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases.	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total Constitut'l Diseases.	48	74	....	92	29	1	27	42	53	5	4	1	2	6	12	10	20	17	9	22	9	4	1	9	6	12	9	14	17	8	8	6	11	15	7	122
NERVOUS DISEASES.																																			
1. Apoplexy	1	10	....	4	6	1	1	7	3	..	..	..	..	..	1	..	..	..	3	..	1	5	1	2	1	1	2	..	1	1	..	1	1	..	1	11
2. Convulsions	5	6	....	11	....	....	10	....	1	3	6	1	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	1	3	2	..	1	11
3. Encephalitis	3	3	....	6	....	....	5	....	1	1	2	1	1	1	..	..	..	..	..	..	..	..	..	..	1	1	1	1	1	..	..	1	..	..	6
4. Epilepsy	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Meningitis	3	1	....	3	1	....	3	....	1	..	..	1	2	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	..	..	..	..	..	4
7. Necrencephalus	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2
8. Paralysis	13	11	....	8	16	....	....	11	13	..	..	..	..	..	..	1	..	1	..	2	11	8	1	3	2	3	4	1	1	2	2	4	..	..	2	24
Total ...	28	31	....	33	25	1	19	18	22	4	8	3	3	3	1	1	..	1	3	4	13	13	2	5	6	7	7	3	6	6	3	8	4	..	4	59
DISEASES OF CIRCULATION.																																			
1. Endocarditis	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	2
2. Pericarditis	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Hypertrophy of Heart	....	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1
4. Angina Pectoris	1	..	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
5. Valvular Diseases	10	6	....	7	8	1	1	4	11	..	..	..	..	..	..	1	3	..	5	4	2	1	..	1	..	1	2	1	..	2	1	3	3	..	2	16
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	1	6	....	6	1	....	1	4	2	..	..	..	..	1	..	2	2	1	..	1	..	..	..	1	1	2	..	1	..	..	..	..	1	1	..	7
Total ...	14	14	....	15	12	1	2	9	17	..	..	..	..	1	..	3	5	1	6	6	3	1	2	3	2	4	2	2	1	2	1	3	4	2	2	28
DISEASES OF RESPIRATION.																																			
1 Bronchitis	3	4	....	6	1	....	4	3	....	3	..	..	..	..	..	..	1	..	2	1	..	..	..	..	..	2	1	1	..	..	..	..	1	..	2	7
2. Pneumonia	25	24	....	37	12	....	20	9	20	5	7	6	..	1	3	2	7	2	2	7	4	3	..	9	4	7	10	4	2	..	..	4	2	4	3	49
3 Pleurisy	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total....	28	29	....	44	13	...	25	12	20	8	7	6	..	2	3	2	7	3	2	9	5	3	..	9	4	9	11	6	2	..	..	4	3	4	5	57

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DEATHS BY COUNTIES IN 1894.—*Continued.*

ONTARIO (Uxbridge, Whitby, Oshawa and Port Perry not included).—POPULATION, 46,774.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	2	....	5	....	....	5	..	....	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	1	1	..	..	5
2. Cholera Morbus	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
3. Diarrhœa Acuta	1	3	....	4	....	....	3	1	.. ..	2	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	3	..	..	..	4
4. Dysentaria Acuta	1	....	.. ..	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
5. Diphtheria and Croup (Cynanche Trachealis)	11	8	....	19	....	....	18	1	....	1	6	9	..	2	1	..	..	..	..	..	..	..	..	1	2	..	1	1	..	3	1	..	4	3	3	19
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	4	4	....	7	....	1	3	1	4	..	..	..	2	1	1	..	4	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	2	2	..	8
8. Scarlatina	5	3	....	8	...	...	8	...	....	2	3	2	1	..	..	..	..	..	..	..	..	..	..	..	1	5	1	..	..	..	..	..	..	1	..	8
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	8	16	....	12	11	1	2	10	12	1	..	..	..	..	..	1	3	3	..	4	8	4	..	14	..	..	2	..	..	..	..	..	..	..	8	24
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	34	38	....	57	13	2	41	14	17	13	10	11	3	3	2	1	7	3	1	4	10	4	..	15	4	5	6	1	1	3	4	6	9	6	12	72
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	1	3	....	2	2	....	....	3	1	..	..	..	..	..	..	..	1	1	..	2	..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	4
3. Anasarca	6	2	....	3	5	....	1	1	6	..	..	1	..	..	..	..	1	..	..	3	2	1	..	1	1	2	1	..	1	..	..	..	..	..	1	8
4. Asthma	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	3
5. Carcinoma	2	3	....	4	1	....	....	3	2	..	..	..	..	..	..	..	..	1	1	2	1	..	..	1	..	1	1	1	..	..	..	..	1	..	..	5
6. Rheumatism and Gout	....	2	....	1	1	....	....	1	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2
7. Hydrocephalus	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2
8. Phthisis	20	16	....	30	6	....	13	9	14	4	3	2	1	1	5	3	8	2	2	2	1	2	..	2	3	3	4	5	1	3	1	3	6	2	3	36
9. Tabes Mesenterica	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
10. Other Tubercular Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
11. Diabetes	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2

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DEATHS BY COUNTIES IN 1894.—*Continued.*

ONTARIO (Uxbridge, Whitby, Oshawa and Port Perry not included).—POPULATION, 46,774.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.														Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	
DISEASES OF LOCOMOTION.																																				
1. Arthritis	....	....	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	72	56	....	82	44	2	40	29	59	20	4	2	4	6	7	5	9	2	6	27	25	11	..	13	13	8	10	14	9	8	6	14	8	14	11	128
DEVELOPMENTAL DISEASES.																																				
1. Diseases of Pre-natal Period	10	12	....	22	....	....	22	....	....	22	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	..	3	3	3	2	1	6	22
2. Diseases of Parturition	...	2	....	2	....	....	....	2	....	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2
3. Diseases of Old Age	19	20	...	12	25	2	....	20	19	..	..	..	..	..	..	..	..	..	..	..	17	22	..	6	5	1	4	3	4	1	2	3	1	1	8	39
Total Developmental Dis's.	29	34	....	36	25	2	22	22	19	22	..	..	..	..	..	..	2	..	..	..	17	22	..	7	6	1	6	3	5	4	5	7	3	2	14	63
VIOLENT DEATHS.																																				
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	6	1	....	6	1	....	3	....	4	..	2	1	..	..	..	..	3	..	..	..	1	..	..	..	1	..	1	..	..	3	..	..	1	..	1	7
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	...	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
5. Drowned	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Total Violent Deaths	8	1	....	8	1	....	4	....	5	..	2	1	..	..	2	..	3	..	..	..	1	..	..	1	1	..	1	1	..	3	..	..	1	..	1	9
Cause not specified	3	3	....	5	1	....	4	1	1	4	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	2	1	1	..	1	6
Total from all causes	180	162	....	235	101	6	127	86	129	65	19	17	8	10	16	10	32	12	11	44	58	40	..	40	33	21	32	25	18	23	20	31	29	25	45	342

DEATHS BY COUNTIES IN 1894 —*Continued.*

OXFORD (Woodstock, Ingersoll, Tilsonburg and Norwich not included).—POPULATION, 51,407.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	5	5	....	10	....	....	10	....	....	8	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	4	1	..	3	10
2. Cholera Morbus	....	1	..	....	1	....	....	1	.	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	3	1	....	4	....	....	4	....	....	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..	..	..	4
4. Dysentaria Acuta	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	1	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	10	8	...	16	2	....	14	....	4	..	4	6	3	2	2	..	..	..	..	..	..	..	1	1	3	..	1	..	3	..	1	3	2	..	4	18
6. Erysipelas	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	1	..	..	..	2
7. Febris Typhoides	4	1	....	5	....	....	1	....	4	..	..	..	..	2	1	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	2	1	..	5
8. Scarlatina	6	4	....	10	....	....	10	....	....	1	3	5	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	..	..	3	1	2	1	..	..	10
9. Puerperal Fever	....	1	....	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
10. Influenza	4	9	....	2	10	1	4	6	3	2	..	1	..	..	..	..	..	..	1	1	3	5	..	8	2	..	1	..	1	..	..	..	..	..	1	13
11. Morbilli	1	....	....	1	....	....	1	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	1	..	..	..	..	..	2	..	..	..	3
14 Variola	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	38	32	....	52	17	1	45	9	16	13	12	12	3	4	4	..	1	2	2	2	6	7	2	11	6	3	4	..	8	2	6	15	6	1	8	70
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	3	....	...	1	2	....	1	...	2	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	3
2. Anæmia	....	6	....	5	1	...	3	....	3	..	1	..	..	2	1	..	..	..	1	1	..	..	..	..	..	1	1	..	..	..	..	..	1	1	1	6
3. Aca-arca	4	2	....	2	4	....	2	1	3	..	..	1	..	..	..	..	..	..	2	1	1	1	..	..	..	1	2	..	..	..	1	1	..	..	1	6
4 Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	7	7	....	5	8	1	....	4	10	..	..	..	..	..	..	..	..	2	6	1	3	2	..	1	1	1	3	1	3	1	..	..	..	..	3	14
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	1	....	1	..	..	1	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
8. Phthisis	13	12	....	23	2	....	7	2	16	..	..	..	2	1	2	5	7	3	2	2	..	1	..	5	2	2	1	1	2	1	2	2	2	1	4	25
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	1	...	....	1	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY COUNTIES IN 1894.—*Continued.*

OXFORD (Woodstock, Ingersoll, Tilsonburg and Norwich not included).—POPULATION, 51,407.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	2	....	2	....	....	1	1	....	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2
Total Constitut'l Diseases.	27	31	....	39	18	1	15	12	31	1	1	1	3	3	4	6	7	6	13	5	4	4	..	6	4	5	9	2	5	2	3	4	3	5	10	58
NERVOUS DISEASES.																																			
1. Apoplexy	3	4	....	3	4	....	....	3	4	..	..	..	..	..	..	..	..	..	3	2	2	..	..	1	..	2	..	1	..	..	..	1	..	..	2	7
2. Convulsions	5	5	....	10	....	....	10	....	....	7	2	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	1	..	2	1	2	1	..	..	1	10
3. Encephalitis	....	2	....	2	....	....	2	..	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
4. Epilepsy	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	2	....	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2
7. Necrencephalus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
8. Paralysis	7	5	....	8	4	....	3	4	5	..	2	..	..	..	..	..	2	1	1	2	3	1	..	2	1	3	..	..	1	2	1	1	..	1	..	12
Total	18	16	....	25	9	...	17	7	10	8	7	..	..	..	..	2	1	1	6	5	3	1	..	3	3	7	1	1	3	4	3	3	1	2	3	34
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	5	6	....	6	5	....	....	3	8	..	..	..	..	..	..	..	1	1	3	3	3	..	..	2	..	1	2	..	..	..	..	1	2	..	3	11
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
7. Syncope	2	6	....	6	2	....	1	4	3	..	..	..	..	..	1	..	1	..	4	2	..	..	..	..	2	..	2	1	..	2	..	1	..	..	..	8
Total	7	12	....	12	7	....	1	7	11	..	..	..	..	..	1	..	2	1	7	5	3	..	..	2	2	1	4	1	..	2	..	2	2	..	3	19
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	1	....	3	1	....	1	1	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	1	2	..	..	..	..	..	..	..	..	..	..	3
2. Pneumonia	16	10	....	17	9	....	8	5	13	5	2	..	1	1	..	2	3	1	1	3	4	3	..	8	4	3	2	3	2	..	1	1	1	..	1	26
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	1	....	....	1	....	..	1	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total	18	12	....	19	11	....	9	7	14	6	2	.	1	1	1	2	3	1	1	3	6	3	..	9	6	3	3	3	2	..	1	1	1	..	1	30

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

PEEL (Brampton not included).—POPULATION, 25,647.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	4	....	4	....	....	4	....	....	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	1	..	..	4
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	6	3	....	9	....	....	9	....	....	..	4	5	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	..	1	1	3	9
6. Erysipelas	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	1	1	....	1	....	1	....	....	2	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
8. Scarlatina	1	1	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	9	6	....	1	14	....	....	4	11	..	..	..	..	..	..	1	1	..	1	2	4	6	..	4	2	2	2	..	..	..	..	..	..	5	15
11. Morbilli	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	1	3	....	2	2	....	2	1	1	..	1	1	..	..	..	..	..	..	..	..	1	1	..	1	1	1	..	..	1	..	..	..	..	..	4
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	2	....	....	....	1	1	....	....	2	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
Total Zymotic Diseases	23	19	....	23	17	2	21	5	16	4	10	7	..	..	..	2	1	2	1	3	5	7	..	6	5	8	2	..	2	1	1	5	2	1	9	42
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	1	....	3	....	1	1	....	3	..	..	..	1	1	..	1	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	2	..	..	..	4
2. Anæmia	4	2	....	5	1	....	4	....	2	4	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	3	1	..	..	..	..	..	1	..	..	6
3. Anasarca	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	1	2	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	3
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	3	2	....	2	3	....	....	2	3	..	..	..	..	..	..	..	..	1	1	1	1	1	..	..	..	1	1	2	..	..	..	..	1	..	..	5
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
8. Phthisis	8	12	....	16	4	....	6	4	10	1	..	..	..	2	4	4	4	3	1	..	..	..	1	2	1	2	2	1	..	3	5	..	..	2	2	20
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	2	....	....	2	....	....	1	....	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

PEEL (Brampton not included).—POPULATION, 25,647.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	...	...	...	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	22	29	....	28	23	....	14	13	24	4	5	1	1	1	1	1	4	3	7	6	13	4	..	1	6	6	6	3	6	4	7	4	2	2	4	51
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	4	....	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	1	..	4
2. Diseases of Parturition	....	3	....	2	1	....	....	3	....	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	3
3. Diseases of Old Age	17	13	....	4	26	....	....	7	23	..	..	..	..	..	..	..	..	..	..	2	7	21	..	2	3	5	4	1	1	2	2	2	..	1	7	30
Total Developmental Dis's.	21	16	....	10	27	....	4	10	23	4	..	..	..	..	..	..	3	..	..	2	7	21	..	3	3	5	5	1	1	3	3	4	..	2	7	37
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	1	....	1	...	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Wounds and other Accidents	2	....	....	2	....	....	....	....	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
3. Murder and Homicide	1	1	....	....	2	....	....	2	....	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	2
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Lightning	....	...	....	..	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Violent Deaths	3	2	....	3	2	....	....	2	3	..	..	..	..	..	1	1	1	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	3	5
Cause not specified	2	....	....	1	1	....	1	....	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2
Total from all causes	92	86	....	94	81	3	53	38	87	18	16	8	2	4	6	9	15	9	12	15	28	34	2	15	19	26	17	7	11	11	18	15	7	7	25	178

DEATHS BY COUNTIES IN 1894.—*Continued.*

PERTH (Stratford, St. Mary's, Listowel and Mitchell not included).—POPULATION, 53,334.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	5	..	6	....	....	6	....	....	4	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	4	1	..	..	6
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	4	7	....	9	2	....	10	....	1	8	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	3	5	2	..	11
4. Dysentaria Acuta	3	3	....	1	5	....	....	2	4	..	..	..	..	..	1	..	..	..	1	..	2	2	..	..	..	..	..	..	..	1	..	4	..	..	1	6
5. Diphtheria and Croup (Cynanche Trachealis)	3	4	....	7	....	....	6	....	1	..	5	2	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	1	..	..	..	..	..	..	1	7
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	2	1	....	3	....	....	1	1	1	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	3
8. Scarlatina	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	4	2	....	2	4	....	1	2	3	1	..	..	..	..	..	..	..	..	..	2	2	1	..	2	1	..	1	..	1	1	..	..	..	..	..	6
11. Morbilli	1	....	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
12. Whooping Cough	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	1	..	4
13. Pyæmia	2	2	....	3	1	....	1	1	2	1	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
16. Other Zymotic Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total Zymotic Diseases	24	24	....	35	13	....	29	6	13	15	10	3	..	3	2	1	..	..	2	2	6	4	..	5	3	4	3	2	2	4	4	13	3	3	2	48
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	4	....	5	1	....	3	1	2	1	1	..	..	1	..	..	1	..	1	1	..	..	..	1	..	..	1	..	..	..	1	1	..	1	1	6
2. Anæmia	1	2	....	3	....	....	3	....	....	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	3
3. Anasarca	5	2	....	3	4	....	....	1	6	..	..	..	..	..	..	..	..	1	1	1	3	..	1	1	2	1	..	..	..	1	1	..	..	1	..	7
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
5. Carcinoma	6	6	....	5	7	....	....	4	8	..	..	..	..	..	..	..	1	1	3	3	2	2	..	2	2	..	..	..	3	..	..	1	..	2	2	..	12
6. Rheumatism and Gout	3	1	....	2	2	..	....	1	3	1	..	..	..	..	1	1	..	..	1	..	1	..	..	..	..	1	..	1	1	..	..	..	..	..	1	4
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Phthisis	12	20	....	26	6	....	2	12	18	..	1	..	..	5	5	3	7	4	1	2	2	1	..	3	2	4	2	5	..	2	..	3	3	4	4	32
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	1	....	2	....	....	1	....	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2

DEATHS BY COUNTIES IN 1894.—*Continued.*

PERTH (Stratford, St. Mary's, Listowel and Mitchell not included).—POPULATION, 53,334.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases	32	36	....	47	21	....	10	19	39	5	2	..	2	7	6	4	9	6	6	8	8	4	1	7	6	6	5	10	3	3	4	4	5	8	7	68
NERVOUS DISEASES.																																			
1. Apoplexy	3	3	....	1	5	....	....	1	5	..	..	..	..	..	..	..	1	..	..	2	2	1	..	1	..	..	..	..	2	1	1	..	..	1	..	6
2. Convulsions	2	1	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	3
3. Encephalitis	3	2	....	4	1	....	1	1	3	1	..	..	..	..	2	1	..	..	..	..	1	..	..	3	1	..	..	..	..	..	1	..	..	..	..	5
4. Epilepsy	1	1	....	2	....	....	....	....	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	1	1	....	2	....	....	1	....	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2
7. Necrencephalus	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Paralysis	6	4	....	2	8	....	1	3	6	..	1	..	..	..	..	..	1	1	..	2	3	2	..	3	..	1	..	1	..	2	..	1	..	..	2	10
Total	16	13	....	15	14	....	7	5	17	3	3	..	1	..	2	3	3	1	..	4	6	3	..	9	1	2	4	1	2	3	2	1	1	1	2	29
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Pericarditis	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
3. Hypertrophy of Heart	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
4. Angina Pectoris	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
5. Valvular Diseases	5	10	....	7	8	....	1	7	7	..	1	..	..	..	..	1	2	..	4	5	1	1	..	1	1	2	..	2	1	..	2	1	3	1	1	15
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	2	8	....	2	7	1	....	6	4	..	..	..	..	..	1	..	..	..	1	3	4	..	1	..	1	3	1	..	1	..	2	1	..	1	..	10
Total	9	20	....	11	17	1	2	14	13	..	2	..	..	..	1	1	2	1	5	9	6	1	1	1	2	7	1	3	2	..	4	2	3	2	2	29
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	2	....	2	2	....	1	1	2	1	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..	1	1	..	..	..	4
2. Pneumonia	8	10	....	11	7	....	8	5	5	2	6	..	1	..	1	1	..	..	2	5	..	..	..	5	2	..	4	..	..	..	3	..	1	2	1	18
3. Pleurisy	2	2	....	2	2	....	1	2	1	1	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	1	..	1	..	..	..	..	..	1	..	4
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	12	14	....	15	11	....	10	8	8	4	6	..	..	1	1	1	1	..	..	4	6	2	..	5	3	2	5	1	..	..	4	1	1	3	1	26

CXIII.

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DEATHS BY COUNTIES IN 1894.—*Continued.*

PETERBOROUGH (Peterborough Town, Ashburnham and Lakefield not included).—POPULATION, 36,412.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	6	2	....	8	....	....	8	....	....	6	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	2	..	..	8
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	3	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	3
4. Dysentaria Acuta	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	1	..	..	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	7	3	....	8	2	....	7	....	3	1	5	1	..	1	..	..	..	1	..	1	..	..	..	..	..	2	2	1	..	1	..	..	1	2	1	10
6. Erysipelas	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	2
7. Febris Typhoides	....	1	..	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
8. Scarlatina	3	2	....	5	....	....	4	....	1	..	2	..	1	..	1	..	..	..	1	..	..	..	..	..	3	1	..	1	..	..	..	..	..	..	..	5
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	2	4	....	1	4	1	....	1	5	..	..	..	..	..	..	..	1	..	..	1	2	2	..	..	5	..	..	..	..	..	..	..	..	..	1	6
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	3	....	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3
13. Pyæmia	2	....	....	2	....	....	1	....	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	27	16	....	34	8	1	27	3	13	13	10	2	1	1	2	..	2	1	1	3	3	4	..	8	3	3	4	4	1	2	5	5	4	2	2	43
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	1	1	....	2	....	....	....	1	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	2
2. Anæmia	5	2	....	4	3	....	2	1	4	2	1	..	..	..	..	1	..	..	1	2	..	..	..	..	..	1	2	..	1	..	..	..	..	3	..	7
3. Anasarca	....	2	....	2	....	....	....	....	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Rheumatism and Gout	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	11	16	....	22	4	1	8	4	15	2	1	..	1	1	5	1	5	2	2	6	..	..	1	..	5	5	..	4	2	..	2	..	4	1	2	2	27
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY COUNTIES IN 1894.—*Continued.*

PETERBOROUGH (Peterborough Town, Ashburnham and Lakefield not included).—POPULATION 36,412.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	57	36	....	53	34	6	27	14	52	17	2	3	1	3	3	6	4	4	9	14	20	5	2	8	5	9	11	12	11	6	2	11	8	4	6	93
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	8	3	....	11	....	....	11	....	....	11	..	..	..	..	..	..	..	..	..	..	..	..	..	4	.	1	1	1	..	1	..	.	1	..	2	11
2. Diseases of Parturition	....	3	....	3	....	....	...	2	1	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	3
3. Diseases of Old Age	15	16	....	2	22	7	....	7	24	..	..	..	..	..	..	..	..	..	..	..	18	13	..	4	2	3	..	3	2	..	4	3	2	6	2	31
Total Developmental Dis's.	23	22	....	16	22	7	11	9	25	11	..	..	..	..	..	..	3	..	..	.	18	13	..	8	2	4	1	4	2	1	5	4	3	6	5	45
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	...	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	5	....	....	3	1	1	1	....	4	..	1	..	..	.	1	1	..	1	..	1	..	..	..	.	1	..	..	..	..	..	2	1	1	..	.	5
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Drowning	1	....	....	....	....	1	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total Violent Deaths	7	....	....	4	1	2	1	....	6	..	1	.	..	1	1	1	1	1	..	1	..	..	..	..	1	..	..	..	..	..	2	2	1	..	1	7
Cause not specified	....	2	....	1	....	1	....	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
Total from all causes	132	97	....	138	73	18	76	33	120	45	15	5	3	7	11	9	15	9	17	27	41	22	3	31	17	17	22	22	15	12	14	26	20	17	16	229

DEATHS BY COUNTIES IN 1894.—*Continued.*

PRESCOTT and RUSSELL (Rockland not included).—POPULATION, 43,790.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	8	5	....	13	....	....	13	....	....	11	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	1	1	1	1	2	13
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	11	11	....	21	....	1	22	....	....	17	5	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	6	8	..	2	1	1	22
4. Dysentaria Acuta	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	25	33	....	58	....	....	58	....	....	12	31	15	..	..	..	..	..	..	..	..	..	..	..	..	4	2	1	1	1	4	6	2	11	16	10	58
6. Erysipelas	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	3	2	....	5	....	....	3	1	1	..	..	2	..	..	..	1	1	..	1	..	..	..	..	..	1	..	..	..	..	1	3	..	..	..	5
8. Scarlatina	23	29	....	52	....	....	52	....	....	7	28	11	4	..	..	..	..	..	..	..	..	..	2	3	8	7	10	9	3	2	..	3	..	2	5	52
9. Puerperal Fever	....	2	....	2	..	....	....	....	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
10. Influenza	12	17	....	29	....	....	18	5	6	4	11	2	..	..	..	3	1	2	..	..	5	1	..	5	9	4	5	3	..	1	..	..	..	..	2	29
11. Morbilli	2	3	....	5	....	....	5	....	..	1	4	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2	1	..	..	..	5
12. Whooping Cough	1	3	...	4	....	....	4	....	...	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	2	..	4
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	86	106	...	191	....	1	175	7	10	55	82	30	4	..	2	4	2	3	1	..	6	1	2	11	24	15	16	14	6	19	19	12	14	22	20	192
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	....	1	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
2. Anæmia	24	23	....	47	...	....	47	....	....	34	10	2	1	..	..	..	..	..	..	..	..	..	..	4	3	3	6	2	..	4	5	6	5	5	4	47
3. Anasarca	2	1	....	3	....	....	1	....	2	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	1	..	..	..	1	..	..	..	1	..	3
4. Asthma	2	2	....	4	....	....	....	2	2	..	..	..	..	..	1	..	..	..	..	2	1	..	..	2	..	..	..	..	..	..	..	..	..	2	..	4
5. Carcinoma	7	5	....	12	....	....	....	5	7	..	..	..	..	..	..	..	1	4	3	3	1	..	..	1	..	2	1	1	1	..	1	..	2	1	2	12
6. Rheumatism and Gout	2	2	....	4	....	....	....	2	2	..	..	..	1	..	..	1	2	..	..	..	..	..	..	1	..	2	1	..	..	..	..	..	..	..	..	4
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	14	54	....	67	....	1	16	28	24	1	5	4	2	8	4	12	14	9	5	1	3	..	..	5	4	6	4	6	7	8	5	5	6	5	7	68
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	3	....	....	3	....	....	3	....	...	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	3

DEATHS BY COUNTIES IN 1894.—*Continued.*

PRESCOTT and RUSSELL (Rockland not included).—POPULATION, 43,790.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	54	88	....	140	1	1	67	37	38	38	15	6	4	8	6	12	15	12	9	7	8	2	..	13	7	15	13	10	8	14	11	11	13	14	13	142
NERVOUS DISEASES.																																				
1. Apoplexy	4	2	....	5	1	....	....	2	4	..	..	..	..	..	..	..	..	1	1	..	2	2	..	..	2	1	..	..	..	3	..	..	..	..	..	6
2. Convulsions	1	2	....	3	....	....	3	....	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	3
3. Encephalitis	2	1	....	2	1	....	2	....	1	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	3
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	4	9	...	11	1	1	....	9	4	..	..	..	..	..	..	1	..	..	2	2	5	3	..	2	..	3	1	4	1	..	1	..	1	..	..	13
Total....	11	14	....	21	3	1	5	11	9	4	2	..	..	..	..	1	..	1	3	2	7	5	..	2	2	6	3	4	1	3	1	..	2	..	1	25
DISEASES OF CIRCULATION.																																				
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	2	....	2	....	....	1	1	....	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
3. Hypertrophy of Heart	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	4	8	....	11	1	....	1	4	7	..	..	..	1	1	..	..	..	1	4	3	..	2	..	2	..	3	..	1	..	1	1	2	..	1	1	12
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	2	....	2	1	....	....	2	1	..	..	..	..	..	..	1	..	..	..	..	2	..	..	1	1	..	1	..	..	..	..	..	..	..	..	3
Total....	5	13	....	16	2	....	2	8	8	..	..	..	2	1	..	1	..	1	5	3	3	2	..	3	1	3	1	1	..	2	1	2	..	2	2	18
DISEASES OF RESPIRATION.																																				
1. Bronchitis	6	5	....	9	2	....	5	4	2	3	2	..	..	..	..	..	..	1	2	1	1	1	..	2	3	2	1	1	..	1	..	..	..	..	1	11
2. Pneumonia	13	11	...	21	1	2	12	3	9	2	3	2	1	2	3	2	1	3	2	1	1	..	1	8	5	..	3	2	..	..	1	2	..	1	2	24
3. Pleurisy	....	2	....	2	....	..	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	19	18	....	32	3	2	19	7	11	5	7	2	1	2	3	2	1	4	4	2	2	1	1	10	8	2	4	3	..	1	1	2	..	3	3	37

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

PRINCE EDWARD (Picton not included).—POPULATION, 19,477.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	...	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Dysentaria Acuta	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	2	2	....	4	....	....	4	....	....	2	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	1	4
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	1	2	....	3	....	....	3	....	....	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	3
8. Scarlatina	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	4	2	....	6	....	....	....	1	5	..	..	..	..	..	..	..	..	1	..	..	4	1	..	..	2	1	..	..	..	..	1	..	..	2	6
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	1	..	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
13. Pyæmia	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	11	7	....	18	....	....	10	1	7	2	4	1	2	1	..	..	..	2	..	..	4	2	..	..	2	1	..	4	..	..	1	3	2	2	3	18
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	....	...	2	....	....	1	....	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2
2. Anæmia	2	4	....	6	....	....	6	....	....	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	1	..	2	6
3. Anasarca	2	3	....	5	....	....	....	2	3	..	..	..	..	..	2	..	..	1	..	1	1	..	..	..	1	..	..	..	..	2	..	1	..	1	5
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	2	5	....	7	....	....	....	3	4	..	..	..	..	..	..	..	3	1	3	..	..	..	..	1	2	..	1	..	1	..	2	..	..	..	..	7
6. Rheumatism and Gout	1	1	....	2	....	....	....	....	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	12	16	....	27	1	....	13	4	11	1	1	..	..	4	1	6	3	6	4	..	..	1	1	..	4	..	3	3	5	2	2	3	2	1	3	28
9. Tabes Mesenterica	....	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1

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DEATHS BY COUNTIES IN 1894.—*Continued.*

PRINCE EDWARD (Picton not included).—POPULATION, 19,477.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Total	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Total Local Diseases	26	41	....	59	8	....	21	11	35	10	3	1	3	1	3	2	2	5	6	13	13	5	..	7	7	5	4	7	2	6	5	9	5	4	6	67
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	11	5	....	16	....	....	16	....	....	16	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	1	..	..	2	..	2	2	3	2	16
2. Diseases of Parturition	....	2	....	2	....	....	....	2	....	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	2
3. Diseases of Old Age	14	14	....	16	12	....	1	3	24	..	..	..	..	..	..	..	..	..	..	..	11	17	..	..	..	2	1	2	4	3	1	3	1	4	7	28
Total Developmental Dis's.	25	21	....	34	12	....	17	5	24	16	..	..	..	..	..	2	..	..	..	..	11	17	..	3	..	4	2	2	4	5	1	5	4	7	9	46
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	...	2	....	2	....	....	....	2	....	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
5. Drowning	3	....	....	3	....	....	....	....	3	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	3
Total Violent Deaths	3	3	....	6	....	....	....	2	4	..	..	..	..	1	2	..	..	..	2	1	..	..	..	..	..	2	2	..	..	..	..	..	..	2	..	..	6
Cause not specified	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	.	..	1	..	..	..	..	..	..	..	..	..	1
Total from all causes	88	101	....	167	22	....	69	28	92	35	9	2	5	7	9	10	5	18	14	19	30	25	1	11	16	14	13	19	14	13	14	21	16	14	24	8

DEATHS BY COUNTIES IN 1894.—*Continued.*

RENFREW (Pembroke, Arnprior and Renfrew Village not included).—POPULATION, 47,388.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	5	3	....	8	....	....	8	....	....	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	1	..	1	..	8
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	5	4	....	9	....	....	9	....	....	5	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	4	1	1	..	..	9
4. Dysentaria Acuta	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	1	2	..	..	..	3
5. Diphtheria and Croup (Cynanche Trachealis)	17	27	....	44	....	....	42	....	2	5	20	12	4	3	..	..	..	..	..	..	..	..	..	3	..	2	3	..	..	3	7	4	1	8	13	44
6. Erysipelas	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1
7. Febris Typhoides	3	1	....	4	..	....	3	....	1	..	1	1	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	1	..	..	4
8. Scarlatina	7	12	....	18	....	1	17	....	2	1	10	5	1	1	..	..	..	..	..	..	..	..	1	2	1	6	2	6	..	..	..	..	1	1	..	19
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	4	4	....	1	7	....	....	3	5	1	..	..	..	..	..	..	..	..	..	..	5	2	..	6	1	..	..	1	..	..	..	..	..	..	..	8
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	2	1	....	3	....	....	2	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	3
13. Pyæmia	1	....	....	1	....	....	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	45	55	....	88	11	1	82	6	12	23	34	19	7	4	..	1	..	..	.	1	5	5	1	11	4	8	6	8	..	8	16	9	4	10	16	100
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	2	1	....	2	1	....	1	1	1	1	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	3
2. Anæmia	8	8	....	16	....	....	15	1	....	11	3	..	1	..	..	..	1	..	..	..	..	..	..	3	2	..	1	1	2	3	..	2	2	..	..	16
3. Anasarca	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	1	..	..	1	..	..	3
4. Asthma	1	1	....	1	1	....	1	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	2
5. Carcinoma	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
6. Rheumatism and Gout	....	2	....	2	....	....	....	1	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	12	15	...	26	1	....	8	7	12	4	1	1	..	1	6	3	7	1	1	1	1	..	..	5	3	1	4	2	2	1	1	..	3	2	3	27
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY COUNTIES IN 1894.—*Continued.*

RENFREW (Pembroke, Arnprior and Renfrew Village not included).—POPULATION, 47,388.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	25	29	....	48	6	....	25	12	17	16	4	1	2	1	7	3	8	3	1	2	4	2	..	10	5	2	8	3	7	4	1	4	5	2	3	54
NERVOUS DISEASES.																																			
1. Apoplexy	1	1	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2
2. Convulsions	2	4	....	6	....	....	6	....	....	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	1	1	..	1	..	6
3. Encephalitis	2	3	....	4	....	1	2	....	3	..	2	..	..	1	..	..	..	..	..	1	1	..	..	1	..	1	1	1	1	..	..	..	..	..	..	5
4. Epilepsy	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	5	6	....	4	7	....	....	5	6	..	..	..	..	..	..	..	..	..	2	2	5	1	1	..	1	..	..	2	..	1	2	1	1	2	1	11
Total....	11	14	....	16	8	1	8	5	12	5	3	..	..	1	..	.	1	1	2	3	7	1	1	1	2	1	2	4	2	1	3	3	1	4	1	25
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	5	5	....	6	3	1	4	....	6	..	..	3	..	..	..	1	..	2	..	2	2	..	..	1	1	..	1	..	..	..	1	1	..	4	1	10
6. Aneurism	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
7. Syncope	2	1	....	1	2	....	....	1	2	..	..	..	..	..	..	..	..	..	3	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	3
Total....	8	6	....	8	5	1	5	1	8	..	..	4	..	..	..	1	..	2	3	2	2	..	..	2	2	..	1	..	..	..	1	1	..	6	1	14
DISEASES OF RESPIRATION.																																			
1. Bronchitis	4	2	....	5	1	....	3	1	2	3	..	..	..	..	1	..	..	1	..	..	..	1	..	..	..	..	2	1	..	..	1	..	..	1	..	1	6
2. Pneumonia	17	4	....	15	6	....	9	1	11	3	2	4	1	2	3	..	2	4	..	..	..	..	..	..	3	1	2	1	1	3	1	1	3	1	2	2	21
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	21	6	....	20	7	....	12	2	13	6	2	4	1	2	4	..	2	5	..	..	..	1	..	3	1	4	2	1	3	2	1	3	2	2	3	27

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DEATHS BY COUNTIES IN 1894.—*Continued.*

SIMCOE (Barrie, Collingwood, Orillia, Midland and Penetanguishene not included).—POPULATION, 73,972.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	5	2	....	7	....	....	7	..	....	3	3	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2	2	1	..	..	7
4. Dysentaria Acuta	2	1	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	1	..	..	..	2	..	..	..	3
5. Diphtheria and Croup (Cynanche Trachealis)	19	19	....	38	....	....	34	1	3	..	17	12	7	..	1	..	1	..	..	..	..	..	..	..	3	1	3	3	5	5	2	4	7	3	2	38
6. Erysipelas	1	2	....	3	....	....	1	....	2	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	1	..	3
7. Febris Typhoides	3	4	....	7	....	....	3	1	3	..	1	..	..	1	2	1	1	1	..	..	..	..	..	..	1	1	1	..	1	..	..	..	1	1	1	7
8. Scarlatina	15	19	..	34	....	....	32	....	2	5	12	11	5	1	..	..	..	..	..	..	..	..	..	..	3	6	2	1	3	4	4	3	2	1	4	1	34
9. Puerperal Fever	....	4	....	4	....	....	....	4	....	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2	4
10. Influenza	11	10	....	8	13	....	3	7	11	..	..	1	1	..	1	..	..	2	6	8	2	..	..	..	7	3	2	1	1	..	..	1	..	..	6	21
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	3	2	....	5	....	....	5	....	....	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	1	1	..	..	5
13. Pyæmia	2	1	....	1	2	....	....	1	2	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	3
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	62	64	....	108	18	....	86	15	25	10	37	25	14	3	5	3	3	2	2	10	9	3	..	11	16	7	6	10	12	10	9	13	12	9	11	126
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	5	7	....	8	4	....	3	6	3	..	1	1	1	1	..	1	..	1	2	1	2	1	..	..	1	1	3	1	2	1	2	..	..	..	1	12
2. Anæmia	...	2	....	1	1	....	1	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
3. Anasarca	6	8	...	11	3	....	8	2	4	7	1	..	..	..	..	1	..	1	2	..	1	1	..	..	2	1	1	..	1	1	..	2	3	2	1	14
4. Asthma	1	3	....	1	3	....	1	2	1	..	1	..	..	..	..	..	..	..	2	1	..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	..	4
5. Carcinoma	3	1	....	2	2	....	....	2	2	..	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..	1	..	..	..	1	..	..	..	..	2	..	4
6. Rheumatism and Gout	1	3	....	4	....	....	1	2	1	..	..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	1	2	..	..	..	..	1	..	..	4
7. Hydrocephalus	2	....	....	1	....	1	1	....	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2
8. Phthisis	20	22	1	39	4	....	8	6	29	2	2	..	1	6	4	7	8	8	..	3	1	..	1	..	5	4	9	5	1	3	2	3	2	3	3	3	43
9. Tabes Mesenterica	2	..	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	4	....	....	3	1	....	....	....	4	..	..	..	..	..	1	..	..	..	1	1	1	..	..	..	1	..	..	..	..	..	..	1	..	1	..	1	4

12. Other Constitutional Diseases	1	3	....	2	2	....	....	3	1	..	..	..	..	..	..	1	1	1	1	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	1	1	4
Total Constitut'l Diseases	45	49	1	74	20	1	25	24	46	13	5	1	2	8	5	10	9	12	9	9	8	3	1	8	10	13	10	5	6	7	9	6	7	8	6	95
NERVOUS DISEASES.																																					
1. Apoplexy	4	2	....	2	4	....	....	1	5	..	..	..	..	1	..	..	..	..	2	..	2	1	..	1	..	..	..	1	..	..	..	2	..	1	1	6
2. Convulsions	7	7	....	14	....	..	14	....	..	11	2	1	..	..	..	..	..	..	..	..	..	..	..	1	2	1	3	..	2	..	1	..	1	1	2	14
3. Encephalitis	7	3	....	8	1	1	8	....	2	3	2	..	2	1	..	..	..	..	..	..	1	..	1	3	1	2	1	..	..	2	1	..	..	..	..	10
4. Epilepsy	1	..	....	1	....	....	..	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
5. Insanity	....	1	.	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
6. Meningitis	1	1	....	1	1	...	1	....	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	2
7. Necrencephalus	....	1	....	..	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Paralysis	6	7	....	3	10	....	1	5	7	..	1	..	..	..	1	..	..	2	4	2	2	1	..	3	1	1	1	1	2	3	..	..	..	..	1	13
Total	26	22	...	30	17	1	24	8	16	14	6	1	2	2	..	1	1	..	5	5	5	4	2	6	6	5	6	3	4	4	5	2	1	2	4	48
DISEASES OF CIRCULATION.																																					
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Pericarditis	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	...	2	....	1	1	....	1	....	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2
5. Valvular Diseases	10	13	....	14	9	....	4	7	12	..	.	2	1	2	1	..	1	..	6	6	4	..	..	3	1	2	2	4	1	..	1	2	..	2	5	23
6. Aneurism	....	1	....	1	....	...	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Syncope	3	9	....	6	6	....	....	7	5	..	..	..	..	..	..	3	2	3	1	3	..	..	..	2	1	1	3	1	2	..	..	..	..	2	..	12
Total	13	26	....	23	16	....	6	15	18	..	..	3	1	3	1	..	4	2	9	8	8	..	..	5	2	3	5	6	3	1	2	2	1	4	5	39
DISEASES OF RESPIRATION.																																					
1. Bronchitis	6	15	....	13	7	1	12	3	6	7	5	..	..	..	1	..	..	1	1	5	..	..	1	2	8	1	1	6	..	..	1	..	..	..	2	21
2. Pneumonia	20	23	....	35	8	....	14	8	21	2	5	5	1	..	2	3	4	7	8	5	..	..	1	7	2	5	4	8	4	2	2	1	..	2	6	43
3. Pleurisy	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	27	38	....	48	16	1	26	11	28	9	10	5	1	..	3	3	4	8	9	11	..	.	2	10	10	6	5	14	4	2	3	1	..	2	8	65
DISEASES OF DIGESTION.																																					
1. Dyspepsia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Enteritis	10	7	....	15	2	....	9	3	5	4	5	..	1	..	..	..	3	2	..	2	..	..	..	2	2	..	2	1	1	1	..	5	2	..	1	17
3. Gastritis	3	....	....	1	2	....	....	....	3	..	..	..	..	..	..	1	..	1	1	..	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	3
4. Hepatitis	3	1	....	1	3	....	1	1	2	1	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	1	..	1	..	1	..	..	1	..	4
5. Peritonitis	2	2	..	2	2	..	....	2	2	..	..	..	..	..	..	1	1	1	1	..	..	..	..	1	..	..	..	1	1	..	1	..	..	..	..	..	4
6. Diseases of Pancreas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Diseases of Spleen	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Other Intestinal Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total	19	10	....	20	9	....	10	6	13	5	5	..	1	..	..	..	5	4	2	6	..	1	..	4	2	..	3	3	4	1	3	5	2	1	1	29
DISEASES OF URINARY ORGANS.																																					
1. Nephria	1	4	....	3	2	....	....	3	2	..	..	..	..	..	2	..	..	1	1	..	1	..	..	1	1	1	..	..	..	..	..	..	1	..	1	..	5
2. Cystitis	1	....	....	..	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Calculus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
4. Other Urinary Diseases	1	....	....	....	1	....	....	...	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Total	4	4	....	3	5	....	....	3	5	..	..	..	..	..	2	..	..	2	1	1	1	1	..	1	1	2	1	..	..	..	..	2	..	1	..	8

DEATHS BY COUNTIES IN 1894.—*Continued.*

SIMCOE (Barrie, Collingwood, Orillia, Midland and Penetanguishene not included).—POPULATION, 73,972.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	89	100	....	124	63	2	66	43	80	28	21	9	5	5	6	4	14	16	26	31	14	6	4	26	21	16	20	26	15	8	13	12	4	10	18	189
DEVELOPMENTAL DISEASES																																			
1. Diseases of Pre-natal Period	22	14	....	36	....	....	36	....	....	36	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	5	6	3	1	1	3	2	1	4	4	36
2. Diseases of Parturition	...	5	...	5	....	....	....	5	....	..	..	..	..	..	..	1	3	1	..	..	..	..	..	..	..	..	2	1	..	1	..	..	..	..	1	5
3. Diseases of Old Age	23	29	....	8	41	3	1	21	30	..	..	..	..	..	..	..	..	..	4	14	34	..	..	5	9	5	3	4	2	5	2	2	6	3	6	52
Total Developmental Dis's.	45	48	....	49	41	3	37	26	30	36	..	..	..	..	..	1	3	1	..	4	14	34	..	6	14	10	11	8	3	7	5	4	7	7	11	93
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	7	2	....	8	1	....	5	....	4	1	3	..	1	1	..	1	..	..	1	1	..	..	..	..	..	1	1	1	..	1	..	1	1	3	..	9
3. Murder and Homicide	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Drowned	2	1	....	2	1	....	1	1	1	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	3
Total Violent Deaths	10	3	....	11	2	....	6	1	6	1	3	..	1	2	1	2	1	..	1	1	..	..	..	..	..	1	2	1	..	2	..	1	2	3	1	13
Cause not specified	2	4	....	2	3	1	....	2	4	..	..	..	..	..	..	..	1	3	1	1	..	..	..	..	1	3	..	1	..	..	..	1	..	..	..	6
Total from all causes	253	268	1	368	147	7	220	111	191	88	66	35	22	18	17	20	31	34	39	56	45	46	5	51	62	50	49	51	36	34	36	37	32	37	47	522

DEATHS BY COUNTIES IN 1894.—*Continued.*

STORMONT, DUNDAS AND GLENGARRY (Morrisburg and Cornwall not included).—POPULATION, 71,918.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	3	....	6	....	....	5	....	1	4	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	2	..	..	..	6
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	7	3	....	10	....	....	10	....	....	8	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	3	2	3	..	..	..	10
4. Dysentaria Acuta	....	1	....	1	....	....	....	1	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	3	4	....	7	....	....	7	....	....	..	6	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	5	..	7
6. Erysipelas	....	2	....	2	....	....	1	1	...	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2
7. Febris Typhoides	4	6	....	7	....	3	2	3	5	..	..	2	..	1	..	..	3	1	1	..	..	..	2	1	..	1	1	..	2	..	1	2	1	..	1	10
8. Scarlatina	21	16	....	37	....	....	32	1	4	2	14	12	6	2	1	..	..	..	..	..	..	..	..	4	6	1	1	5	2	2	..	3	3	4	6	37
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	8	7	....	12	3	....	5	4	6	3	1	1	..	..	..	..	1	2	1	2	2	2	..	6	2	3	..	..	..	..	..	..	..	..	4	15
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	3	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	3
13. Pyæmia	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
16. Other Zymotic Diseases	2	2	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	1	..	4
Total Zymotic Diseases	49	49	....	92	3	3	70	11	17	23	26	16	8	3	2	..	4	6	2	2	2	2	2	13	9	6	5	7	6	7	7	11	5	10	12	98
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	4	4	....	4	4	....	...	2	6	..	..	..	..	..	..	..	..	2	2	..	2	1	1	..	3	1	..	..	1	..	..	2	..	..	1	8
2. Anæmia	4	5	....	8	1	....	7	....	2	1	5	..	..	1	..	1	..	..	..	1	..	..	..	1	..	..	1	1	..	..	3	..	..	2	1	9
3. Anasarca	4	10	....	12	1	1	....	5	9	..	..	..	..	..	..	..	1	2	1	2	4	2	2	1	1	1	3	1	1	..	3	..	..	1	2	14
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	6	6	..	7	5	....	2	3	7	..	..	..	..	..	1	..	..	..	4	5	2	..	..	1	2	..	1	..	1	1	2	1	..	1	2	12
6. Rheumatism and Gout	3	5	....	8	....	....	1	2	5	..	..	1	..	..	..	..	..	2	1	3	1	..	..	..	1	..	..	3	..	1	..	1	1	..	1	8
7. Hydrocephalus	1	..	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
8. Phthisis	25	31	....	51	2	3	8	8	40	3	..	1	1	1	12	7	13	5	5	1	2	2	3	6	7	3	4	8	4	3	6	2	2	4	7	56
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2

DEATHS BY COUNTIES IN 1894.—*Continued.*

STORMONT, DUNDAS AND GLENGARRY (Morrisburg and Cornwall not included).—POPULATION, 71,918.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	1	....	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total Constitut'l Diseases.	48	63	....	94	13	4	20	21	70	4	6	2	1	2	14	8	14	9	15	10	14	6	6	9	14	5	11	13	7	6	15	6	3	8	14	111
NERVOUS DISEASES.																																				
1. Apoplexy	2	2	....	4	....	....	....	2	2	..	..	..	..	..	..	..	..	2	..	1	..	1	..	..	..	1	..	..	1	2	..	..	..	..	..	4
2. Convulsions	2	3	....	5	....	....	5	....	....	3	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	1	..	..	..	1	5
3. Encephalitis	2	3	....	5	....	....	3	1	1	..	1	1	1	..	..	..	..	2	..	..	..	..	..	..	1	1	1	..	..	..	..	1	..	1	..	5
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	11	8	....	13	6	....	2	5	12	1	..	..	..	1	2	..	..	..	2	3	2	8	..	4	1	2	..	2	..	3	2	1	3	..	1	19
Total	18	16	....	28	6	....	10	8	16	4	3	1	1	1	2	..	..	3	4	3	3	8	1	6	2	5	2	2	1	5	3	2	3	1	2	34
DISEASES OF CIRCULATION.																																				
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	8	11	....	15	3	1	1	5	13	..	..	..	..	..	..	..	1	2	1	8	7	..	..	4	2	2	3	1	1	1	2	..	1	1	19
6. Aneurism	....	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
7. Syncope	5	9	....	8	6	....	....	4	10	..	..	..	..	1	..	..	1	..	1	4	3	3	1	..	..	4	1	..	5	1	..	1	1	1	..	14
Total	13	21	....	23	9	2	1	9	24	..	..	..	..	1	..	..	2	2	2	12	10	3	2	4	2	6	4	1	6	2	1	3	1	3	1	34
DISEASES OF RESPIRATION.																																				
1. Bronchitis	2	6	....	7	1	....	6	1	1	4	1	1	..	..	..	1	..	..	..	..	..	1	..	1	1	..	1	3	..	..	..	1	..	..	1	8
2. Pneumonia	14	10	....	22	2	....	13	4	7	5	4	1	1	..	..	1	3	1	..	3	4	1	..	3	3	4	4	1	2	2	1	1	..	1	2	24
3. Pleurisy	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	1	3
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	18	17	....	31	4	....	19	6	10	9	5	2	1	..	..	2	4	2	..	3	4	3	..	4	5	4	5	4	2	2	1	2	1	1	4	35

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DEATHS BY COUNTIES IN 1894 — *Continued.*

VICTORIA (Lindsay, Bobcaygeon and Fenelon Falls not included).—POPULATION, 34,021.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	3	....	4	....	....	4	....	....	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	1	..	..	4
2. Cholera Morbus	..	..	....	..	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	2	1	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	8	14	....	20	....	2	16	1	5	2	4	5	4	5	..	..	1	..	..	..	..	..	1	1	3	6	1	..	1	..	..	..	6	2	2	22
6. Erysipelas	..	..	....	..	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	1	....	1	..	....	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	..	1	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1
10. Influenza	8	4	....	7	4	1	1	3	8	1	..	..	..	..	..	2	..	1	2	3	2	1	..	6	1	1	..	..	1	..	..	..	..	..	3	12
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	20	25	....	37	5	3	24	6	15	9	5	5	4	6	..	3	1	1	2	3	3	1	2	7	4	7	1	..	3	..	1	5	9	2	6	45
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	3	....	4	1	....	2	2	1	1	..	..	..	..	1	..	..	..	2	..	1	..	..	1	..	..	..	1	1	..	..	2	..	..	..	5
2. Anæmia	1	1	....	2	....	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2
3. Anasarca	1	5	..	2	4	....	1	3	2	..	..	..	1	..	..	..	1	..	1	1	..	2	..	3	..	1	1	..	..	1	..	..	..	..	..	6
4. Asthma	2	....	....	....	2	....	....	....	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2
5. Carcinoma	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	1	3
6. Rheumatism and Gout	2	1	..	1	2	....	1	1	1	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..	..	2	3
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
8. Phthisis	10	18	....	26	2	....	4	10	14	1	..	..	..	2	5	4	9	2	2	2	..	..	1	1	3	2	2	3	2	3	4	3	2	3	..	28
9. Tabes Mesenterica	1	....	....	1	..	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	3	....	....	1	2	....	....	....	3	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	1	..	..	..	2	..	3

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

VICTORIA (Lindsay, Bobcaygeon and Fenelon Falls not included).—POPULATION, 34,021.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . .
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . . . .
3. Other Locomotor Diseases	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . . . .
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	47	42	....	54	32	3	30	24	35	13	9	3	2	4	2	2	4	4	12	11	13	7	3	8	7	9	12	6	6	7	4	6	5	6	13	89
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	7	6	....	13	....	...	13	....	....	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	1	2	..	1	..	3	..	..	1	13
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diseases of Old Age	7	10	....	3	14	....	3	8	6	..	..	..	..	..	..	..	..	..	..	1	3	13	..	2	2	4	1	1	..	1	1	4	..	1	..	17
Total Developmental Dis's.	14	16	....	16	14	....	16	8	6	13	..	..	..	..	..	..	..	..	..	1	3	13	..	2	4	7	2	3	..	2	1	7	..	1	1	30
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . . . .
2. Wounds and other Accidents	4	....	....	2	2	....	...	....	4	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	1	..	..	..	..	1	1	..	..	1	..	4
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowning	3	....	....	3	....	....	1	....	2	..	..	..	..	1	..	..	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	3
Total Violent Deaths	7	....	....	5	2	....	1	....	6	..	..	..	..	1	1	1	1	2	1	..	..	..	..	2	1	..	..	..	..	1	1	1	..	1	..	7
Cause not specified	1	....	....	1	....	...	...	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total from all causes	114	112	...	153	67	6	82	55	89	37	15	11	7	13	9	11	16	10	22	19	25	25	6	25	20	27	19	14	12	18	12	24	16	15	24	226

DEATHS BY COUNTIES IN 1894.—*Continued.*

WATERLOO (Galt, Berlin, Waterloo, Hespeler, Preston and New Hamburg not included).—POPULATION, 52,037.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	3	....	4	....	....	4	....	...	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	4
2. Cholera Morbus	1	1	....	1	1	....	1	....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
3. Diarrhœa Acuta	1	8	....	9	....	....	9	....	....	5	1	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	6	2	..	..	9
4. Dysentaria Acuta	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Diphtheria and Croup (Cynanche Trachealis)	4	6	....	10	....	....	9	....	1	2	1	4	2	..	..	..	..	..	..	1	..	..	..	..	1	1	1	..	..	1	..	..	2	2	2	10
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	2	2	....	4	....	....	3	....	1	..	2	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	1	4
8. Scarlatina	4	3	....	7	....	....	6	....	1	1	4	1	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	3	1	..	..	..	1	..	7
9. Puerperal Fever	....	1	....	1	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
10. Influenza	2	4	....	2	4	....	2	3	1	1	1	..	..	..	..	..	..	..	..	1	2	1	..	3	1	..	..	1	..	..	..	..	..	1	6
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
13. Pyæmia	....	2	..	2	....	....	1	1	....	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
14. Variola	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	16	30	....	41	5	....	36	5	5	13	11	7	3	1	2	1	1	1	..	2	3	1	..	3	4	1	4	4	1	2	2	12	7	2	4	46
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	4	....	5	2	....	2	1	4	1	..	..	..	1	..	1	2	..	1	..	..	1	..	..	..	1	1	2	..	..	1	1	1	..	..	7
2. Anæmia	4	2	....	6	....	....	5	....	1	4	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2	..	..	2	..	1	..	..	..	6
3. Anasarca	3	4	....	1	6	...	....	3	4	..	..	..	..	..	..	..	..	1	1	2	2	1	..	..	3	..	1	..	..	..	2	..	..	..	1	7
4. Asthma	1	....	..	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
5. Carcinoma	7	10	....	6	11	....	2	8	7	1	..	..	..	..	..	..	..	2	4	3	6	1	..	1	2	2	1	..	2	3	..	2	1	3	..	17
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Phthisis	9	11	....	16	3	1	3	3	14	2	1	..	..	2	2	3	4	4	..	..	1	..	1	1	2	3	3	2	1	1	..	5	1	1	..	20
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1

DEATHS BY COUNTIES IN 1894.—*Continued.*

WATERLOO (Galt, Berlin, Waterloo, Hespeler, Preston and New Hamburg not included).—POPULATION, 52,037.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-35.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con*																																			
12. Other Constitutional Diseases	1	....	....	...	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total Constitut'l Diseases	29	31	....	34	25	1	12	15	33	8	2	..	..	3	2	4	6	7	7	6	11	3	1	2	8	6	8	5	4	6	3	9	3	4	2	60
NERVOUS DISEASES.																																			
1. Apoplexy	3	3	....	1	5	....	....	2	4	..	..	..	..	..	..	..	..	..	..	2	4	..	..	..	..	..	1	..	2	1	1	..	1	..	..	6
2. Convulsions	9	5	....	14	....	....	13	....	1	11	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2	4	..	2	1	..	1	2	..	1	14
3. Encephalitis	1	3	....	4	....	....	3	....	1	1	2	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	1	4
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	2	1	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	3
7. Necrencephalus	...	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	4	8	....	7	5	....	...	7	5	..	..	..	..	..	..	..	..	1	4	2	4	1	..	1	1	1	2	..	..	1	..	3	3	..	..	12
Total	19	21	....	29	10	1	19	9	12	13	6	..	..	..	..	1	2	1	4	4	8	1	..	3	3	3	7	..	4	4	1	5	7	1	2	40
DISEASES OF CIRCULATION.																																			
1. Endocarditis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	1	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	1	...	...	...	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Valvular Diseases	5	8	....	6	7	....	3	3	7	1	..	..	1	1	..	..	1	1	2	1	3	2	..	..	1	..	2	1	..	2	..	..	3	1	3	13
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	7	7	....	6	8	...	1	7	6	1	..	..	..	..	..	1	..	1	2	1	5	3	..	2	2	1	..	..	1	..	..	1	4	2	1	14
Total	13	16	....	13	16	....	5	10	14	2	..	1	1	1	..	1	1	2	4	2	9	5	.	2	3	2	2	1	1	2	..	2	7	3	4	29
DISEASES OF RESPIRATION.																																			
1. Bronchitis	3	1	....	3	1	....	2	....	2	3	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	1	..	..	..	..	..	..	..	..	4
2. Pneumonia	4	7	..	9	2	....	7	3	1	3	2	..	2	..	1	..	..	..	1	1	..	1	..	1	2	1	3	..	..	..	3	..	..	..	1	11
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Total	7	8	....	12	3	....	9	3	3	6	2	..	2	..	1	..	..	..	1	2	..	1	..	2	3	2	4	..	..	..	3	..	..	..	1	15

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DEATHS BY COUNTIES IN 1894.—*Continued.*

WELLAND (Niagara Falls Town, Niagara Falls Village, Welland, Thorold and Port Colborne not included).—POPULATION, 31,588.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	2	....	5	....	....	5	....	....	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	1	..	..	5
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	2	....	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2
4. Dysentaria Acuta	....	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	2	1	....	3	....	....	3	..	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	3
6. Erysipelas	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	1	2
7. Febris Typhoides	7	....	....	4	2	1	2	....	5	..	1	..	..	1	1	..	..	1	..	1	1	1	..	..	2	2	..	..	..	..	..	..	..	1	2	7
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	1	..	1	....	....	....	1	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
10. Influenza	3	3	....	..	5	1	....	2	4	..	..	..	..	..	..	..	..	..	..	2	3	1	..	3	..	..	..	..	1	..	..	..	1	1	6
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	2	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
13. Pyæmia	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	1	....	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	18	12	....	19	9	2	15	5	10	8	5	..	..	2	2	..	..	1	..	4	5	3	..	3	2	2	5	1	1	3	3	1	2	2	5	30
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	2	....	4	1	....	....	1	4	..	..	..	..	..	..	1	..	1	..	2	1	..	..	..	..	..	..	..	1	2	..	..	2	..	5
2. Anæmia	2	1	....	2	1	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	3
3. Anasarca	3	3	....	5	1	....	....	2	4	..	..	..	..	..	..	..	..	..	..	5	1	..	..	..	..	..	1	1	1	..	2	..	..	1	..	6
4. Asthma	2	1	....	1	2	....	....	1	2	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	1	..	..	1	..	..	..	..	..	..	3
5. Carcinoma	2	2	....	2	2	....	....	1	3	..	..	..	..	..	..	..	..	1	..	2	1	..	..	1	1	..	1	..	..	..	..	..	..	1	..	4
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	9	14	....	20	3	....	8	5	10	2	2	..	2	1	1	2	3	4	..	4	2	..	..	1	6	3	..	1	4	2	2	2	..	1	1	23
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1

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DEATHS BY COUNTIES IN 1894.—*Continued.*

WELLAND (Niagara Falls Town, Niagara Falls Village, Welland, Thorold and Port Colborne not included).—POPULATION, 31,588.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	39	33	....	45	24	3	24	20	28	12	3	1	2	1	2	1	3	9	5	9	20	4	..	6	5	8	9	4	5	12	1	6	6	8	2	72
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	2	6	....	8	....	....	8	....	....	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	1	..	2	1	..	8
2. Diseases of Parturition	....	1	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
3. Diseases of Old Age	8	10	....	6	9	3	1	8	9	..	..	..	..	..	..	..	..	..	2	4	12	..	..	1	1	..	..	3	1	1	..	5	2	3	1	18
Total Developmental Dis's.	10	17	....	15	9	3	9	9	9	8	..	..	..	..	..	..	1	..	..	2	4	12	..	1	1	1	1	4	1	2	1	5	4	4	2	27
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	1	...	3	....	....	1	....	2	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	3
2. Wounds and other Accidents	2	1	...	2	1	....	1	....	2	..	1	..	1	..	1	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	3
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	2	....	....	....	1	1	....	....	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	2
5. Drowning	3	....	....	3	....	....	2	....	1	..	..	2	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	3
6 Lightning	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total Violent Deaths	10	2	....	8	3	1	4	....	8	..	2	2	1	1	1	..	1	1	1	1	..	..	1	3	..	3	2	..	1	2	..	1	..	..	..	12
Cause not specified	1	3	....	2	2	....	1	1	2	..	..	1	..	..	..	..	1	..	2	..	..	..	..	..	..	..	1	..	1	1	..	..	1	..	..	4
Total from all causes	100	90	....	123	58	9	64	45	81	31	14	4	5	5	6	4	8	18	6	32	36	20	1	16	18	18	20	11	15	24	11	15	13	19	10	190

DEATHS BY COUNTIES IN 1894.—*Continued.*

WELLINGTON (Guelph, Elora, Fergus, Mount Forest, Harriston, Palmerston and Arthur Village not included).—POPULATION, 61,295.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10 15.	15-20.	20-25.	25-30.	30 40.	40-50.	50-60	60-70.	70 80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	5	2	..	7	....	....	7	....	...	6	1	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	..	7
2. Cholera Morbus	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
3. Diarrhœa Acuta	2	5	....	7	....	....	7	....	....	5	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	1	3	..	..	..	7
4. Dysentaria Acuta	3	1	....	....	4	....	....	1	3	..	..	..	..	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	1	..	2	..	..	1	4
5. Diphtheria and Croup (Cynanche Trachealis)	10	7	....	17	....	....	15	1	1	..	9	2	4	..	1	..	..	..	..	1	..	..	..	1	3	1	..	..	1	..	..	4	4	..	3	17
6. Erysipelas	2	1	..	2	1	....	2	....	1	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	3
7. Febris Typhoides	6	1	....	7	....	....	2	...	5	..	..	1	..	1	2	..	2	..	..	..	1	..	..	2	..	1	1	..	..	..	..	..	2	1	7
8. Scarlatina	4	1	....	5	....	....	5	...	....	..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	2	..	..	5
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	9	10	....	5	13	1	1	7	11	1	..	..	..	..	..	1	1	2	1	6	3	4	..	11	1	2	..	..	..	1	..	..	..	..	4	19
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	....	5	....	5	....	....	5	....	....	2	3	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2	..	..	1	..	..	..	5
13. Pyæmia	3	3	....	5	1	....	3	2	1	1	..	2	..	..	1	..	..	..	1	1	..	..	..	..	1	1	..	1	2	..	1	..	..	..	..	6
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
16. Other Zymotic Diseases	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total Zymotic Diseases	46	37	....	63	19	1	50	11	22	20	18	7	4	1	4	1	3	2	3	10	5	5	..	16	5	6	4	1	7	5	2	17	8	3	9	83
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	8	...	7	2	....	2	5	2	..	..	2	..	1	..	1	1	1	1	2	..	..	..	..	..	..	1	..	1	2	1	2	..	1	1	9
2. Anæmia	3	2	...	4	1	....	4	....	1	2	2	.	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2	2	..	..	..	5
3. Anasarca	4	1	....	1	4	....	1	....	4	..	..	..	..	1	..	..	..	..	..	1	3	..	..	1	..	..	..	..	1	..	..	..	2	..	1	5
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	5	7	....	5	7	....	....	6	6	..	..	..	..	..	..	..	..	2	5	3	2	..	..	2	2	2	..	..	1	..	..	1	1	1	2	12
6. Rheumatism and Gout	....	2	....	1	1	..	1	1	....	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	2
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
8. Phthisis	19	15	....	25	9	..	8	6	20	2	..	..	..	6	4	2	7	5	4	2	2	..	..	4	5	2	3	1	5	2	2	3	5	2	..	34
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	5	2	....	5	2	....	2	....	5	..	..	2	..	1	..	..	1	..	..	1	2	..	..	..	..	1	..	1	1	..	..	2	1	1	..	7

DEATHS BY COUNTIES IN 1894.—*Continued.*

WELLINGTON (Guelph, Elora, Fergus, Mount Forest, Harriston, Palmerston and Arthur Village not included).—POPULATION, 61,295.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	1	....	1	....	....	....	1	...	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total Constitut'l Diseases.	38	38	..	50	26	....	19	19	38	5	3	4	..	9	4	3	9	8	11	10	10	..	..	7	7	5	4	2	10	5	6	11	9	5	5	76
NERVOUS DISEASES.																																			
1. Apoplexy	2	2	....	..	4	....	....	2	2	..	..	..	..	..	..	..	..	1	1	1	1	..	..	1	..	1	..	..	..	2	..	..	..	..		4
2. Convulsions	5	5	....	10	....	....	10	....	....	7	2	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	1	..	3	1	1	10
3. Encephalitis	5	3	....	8	....	....	7	....	1	3	3	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	2	1	1	..	1	..	..	2	1	8
4. Epilepsy	5	1	....	6	....	....	2	1	3	..	2	..	..	1	1	..	2	..	..	..	..	..	..	..	..	..	1	1	..	..	1	2	1	..	..	6
5. Insanity	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
6. Meningitis	3	2	....	5	....	....	4	....	1	3	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	1	..	1	..	..	..	5
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	17	14	....	10	20	1	2	7	23	..	1	..	..	..	1	2	..	2	4	8	9	4	..	2	2	2	4	2	1	5	2	4	1	4	2	31
Total....	38	27	....	40	24	1	25	10	30	13	9	1	1	1	2	2	3	3	5	10	10	5	..	3	5	3	8	6	2	6	7	7	7	7	4	65
DISEASES OF CIRCULATION.																																			
1. Endocarditis	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
2. Pericarditis	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	6	5	....	6	5	....	2	2	7	1	..	..	..	1	1	..	..	1	1	5	..	..	..	..	1	..	..	2	2	1	..	..	1	1	3	11
6. Aneurism	....	1	..	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
7. Syncope	9	4	....	1	12	....	....	5	8	..	..	..	..	..	..	..	..	2	1	..	9	2	..	1	1	2	..	1	1	2	1	1	..	2	1	13
Total....	17	10	....	9	18	....	2	8	17	1	..	..	..	1	2	..	..	3	2	5	10	3	..	1	2	2	..	4	3	4	1	1	1	3	5	27
DISEASES OF RESPIRATION.																																			
1. Bronchitis	4	4	....	5	3	...	3	2	3	2	1	..	..	1	1	..	..	..	..	..	1	2	..	..	..	..	4	4	..	..	..	..	..	..	..	8
2. Pneumonia	16	10	....	9	13	4	6	8	12	2	1	2	1	..	..	..	..	1	3	7	5	2	2	1	3	4	7	4	2	..	..	..	2	..	3	26
3. Pleurisy	....	2	....	2	....	....	1	....	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	20	16	....	16	16	4	10	10	16	4	2	2	1	2	1	..	..	1	4	7	6	4	2	1	3	4	11	9	2	1	..	..	2	..	3	36

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

WENTWORTH (Hamilton and Dundas not included).—POPULATION 81,317.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	4	....	6	....	....	6	....	....	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	1	..	2	..	..	6
2. Cholera Morbus	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
3. Diarrhœa Acuta	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
4. Dysentaria Acuta	1	....	..	....	1	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	4	2	....	6	....	....	6	....	....	1	4	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	2	..	..	..	2	..	..	..	6
6. Erysipelas	1	....	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
7. Febris Typhoides	....	2	....	2	....	....	1	....	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
8. Scarlatina	2	5	....	7	....	....	7	....	....	2	3	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	2	..	..	..	..	2	..	7
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	8	1	....	4	4	1	1	1	7	1	..	..	..	..	..	..	..	..	..	2	1	4	1	1	2	1	2	1	..	..	..	..	..	2	9
11. Morbilli	1	..	....	1	....	..	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	1	....
13. Pyæmia	2	2	....	2	2	....	....	1	3	..	..	..	..	..	1	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	22	17	....	30	8	1	24	2	13	10	8	2	3	..	1	..	2	1	1	4	1	5	1	5	5	2	4	5	4	..	1	4	2	4	3	39
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
2. Anæmia	1	6	....	6	1	....	4	2	1	1	1	1	1	..	..	1	..	..	1	1	..	..	..	..	..	..	1	..	..	2	..	1	..	1	2	7
3. Anasarca	..	3	....	1	2	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	2	..	..	1	..	..	..	..	3
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	14	6	....	9	10	1	....	2	18	..	..	..	..	..	..	..	..	2	8	4	4	1	1	2	3	..	2	2	4	1	5	..	1	..	..	20
6. Rheumatism and Gout	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	14	20	....	29	4	1	6	5	23	..	..	1	1	1	6	5	9	3	3	2	..	..	3	4	5	3	1	3	1	2	2	1	4	3	5	34
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	2	1	....	2	1	....	....	1	2	..	..	..	..	1	..	..	..	..	..	2	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	3

| | | |

DEATHS BY COUNTIES IN 1894.—*Continued.*

WENTWORTH (Hamilton and Dundas not included).—POPULATION 81,317.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	80	68	....	93	50	5	41	28	79	23	6	5	3	4	4	3	11	15	11	25	26	9	3	17	11	15	17	13	13	6	9	14	13	8	12	148
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	9	6	....	15	....	....	15	..	....	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	2	..	2	1	4	2	15
2. Diseases of Parturition	....	3	....	3	....	....	....	3	....	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	3
3. Diseases of Old Age	13	24	....	11	25	1	3	13	21	..	..	..	..	..	..	..	..	..	..	..	10	27	..	7	..	4	5	2	3	4	3	1	4	2	2	37
Total Developmental Dis's.	22	33	....	29	25	1	18	16	21	15	..	..	..	..	..	1	2	..	..	..	10	27	..	7	2	4	5	3	4	7	3	4	5	7	4	55
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	11	1	....	8	4	..	2	....	10	2	..	..	..	..	..	2	2	2	3	..	..	1	..	3	..	..	..	1	2	2	..	3	1	..	..	12
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	1	....	....	1	....	1	....	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Drowning	3	1	....	2	2	....	2	....	2	..	..	..	2	1	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	1	..	4
Total Violent Deaths	14	3	....	10	7	....	5	....	12	2	..	..	2	1	..	2	2	3	3	..	1	1	..	4	..	..	..	2	2	2	1	3	1	2	..	17
Cause not specified	....	1	....	...	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total from all causes	173	158	....	212	110	9	100	58	173	52	16	9	10	7	11	12	26	24	27	41	44	44	8	41	28	25	33	30	28	21	21	27	26	25	26	331

DEATHS BY COUNTIES IN 1894.—*Concluded.*

YORK (City of Toronto, Toronto Junction, East Toronto, North Toronto, Weston, Newmarket and Aurora not included).—POPULATION, 259,795.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	6	....	9	....	....	8	....	1	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	3	..	..	..	9
2. Cholera Morbus	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	7	4	..	10	1	....	7	....	4	9	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	4	3	3	..	..	11
4. Dysentaria Acuta	2	1	....	1	2	..	....	1	2	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	..	1	..	..	3
5. Diphtheria and Croup (Cynanche Trachealis)	6	9	....	14	1	....	12	1	2	2	2	5	3	..	2	..	1	..	..	..	..	..	..	2	1	1	..	2	..	..	4	1	2	..	2	15
6. Erysipelas	....	3	....	1	2	....	1	....	2	1	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	3
7. Febris Typhoides	3	4	....	6	1	....	2	3	2	..	..	1	..	..	..	2	1	..	2	1	..	..	..	2	..	1	..	1	..	..	..	..	2	1	..	7
8. Scarlatina	4	2	....	6	..	....	6	....	....	..	3	2	1	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	2	1	..	..	..	..	..	6
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	7	8	..	8	5	2	....	4	11	..	..	..	..	1	..	..	..	..	1	3	4	5	1	6	4	..	..	..	..	..	..	..	..	..	5	15
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	3	....	....	3	....	....	....	....	3	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	1	3
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
16. Other Zymotic Diseases	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total Zymotic Diseases	38	37	....	60	12	3	37	9	29	21	6	8	4	2	3	3	2	..	6	6	6	7	1	12	7	5	1	3	3	8	12	7	8	1	8	75
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	5	5	....	4	6	....	1	4	5	..	..	1	..	..	.	1	..	1	1	3	2	1	..	..	2	2	..	.	1	..	..	1	1	1	2	10
2. Anæmia	6	7	....	11	2	....	6	2	5	4	..	..	1	..	2	..	..	1	3	2	..	..	..	1	..	..	2	..	..	1	5	1	2	..	1	13
3. Anasarca	2	5	....	5	1	....	1	2	4	1	..	..	..	1	..	..	..	..	2	1	2	..	..	1	1	..	..	1	..	..	1	..	..	2	1	7
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
5. Carcinoma	8	11	....	7	12	....	....	5	14	..	..	..	..	..	..	..	2	3	1	6	3	4	..	..	3	..	2	1	1	4	3	2	1	1	1	19
6. Rheumatism and Gout	....	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Phthisis	23	32	....	39	13	3	7	18	30	3	..	1	..	1	6	5	7	9	12	5	3	1	2	8	2	2	8	6	2	3	4	7	5	2	6	55
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	4	2	...	6	....	....	1	2	3	..	..	..	2	..	..	..	..	..	1	2	1	..	..	1	1	..	..	..	..	..	1	..	..	1	2	6

DEATHS BY COUNTIES IN 1894.—*Concluded.*

YORK (City of Toronto, Toronto Junction, East Toronto, North Toronto, Weston, Newmarket and Aurora not included).—POPULATION, 259,795.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases.	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total Constitut'l Diseases.	51	63	....	75	35	4	17	33	64	9	..	2	3	2	8	6	9	14	21	19	12	6	3	11	10	5	12	8	4	9	14	11	9	7	14	114
NERVOUS DISEASES.																																			
1. Apoplexy	3	6	....	4	4	1	....	3	6	..	..	..	..	..	..	..	1	..	2	4	2	..	..	..	..	1	1	..	2	1	2	1	1	..	9
2. Convulsions	6	3	....	9	....	....	8	....	1	6	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	1	1	2	..	1	1	9
3. Encephalitis	3	8	....	10	1	....	8	....	3	5	2	1	..	1	1	..	..	..	..	1	..	..	..	3	..	1	..	..	1	..	2	1	2	1	..	11
4. Epilepsy	2	1	....	2	1	....	1	....	2	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	1	3
5. Insanity	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
6. Meningitis	4	....	....	4	....	....	3	....	1	2	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	1	4
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	11	8	....	5	12	2	1	4	14	..	..	..	1	..	..	..	..	..	2	7	7	2	..	1	2	1	..	4	..	3	2	1	1	4	..	19
Total	30	26	....	34	19	3	21	7	28	13	5	1	2	1	1	..	1	1	6	13	10	2	..	4	3	4	1	6	2	6	6	6	6	9	3	56
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart.	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Valvular Diseases	8	4	....	6	6	....	1	3	8	1	..	..	1	..	..	..	1	1	3	2	1	2	..	3	..	..	2	2	..	2	..	1	1	..	1	12
6. Aneurism	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
7. Syncope	12	8	....	8	10	2	6	4	10	2	..	1	2	..	..	..	..	1	1	3	9	1	..	4	2	2	2	2	2	1	..	2	..	2	1	20
Total	20	14	....	15	17	2	7	8	19	3	..	1	3	..	..	..	1	3	4	5	11	3	..	7	2	2	4	4	2	3	..	4	1	3	2	34
DISEASES OF RESPIRATION.																																			
1. Bronchitis	6	4	....	6	2	2	4	1	5	3	1	..	..	..	..	..	..	..	2	1	1	2	..	1	..	1	3	1	3	..	..	..	1	..	..	10
2. Pneumonia	27	14	....	25	14	2	9	5	27	2	3	1	2	2	3	2	1	7	4	5	5	3	1	4	10	6	6	3	..	..	1	2	2	2	5	41
3. Pleurisy	....	....	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	33	18	....	31	16	4	13	6	32	5	4	1	2	2	3	2	1	7	4	7	6	4	3	5	10	7	9	4	3	..	1	2	3	2	5	51

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DEATHS BY CITIES IN 1894.—*Continued.*

CHATHAM.—Population, 9,334.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	2	....	5	....	....	5	....	..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	..	..	..	5
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	2	2	....	4	....	....	4	....	....	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	..	..	4
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	8	4	....	12	....	....	12	....	....	1	..	10	1	..	..	..	..	..	..	..	..	..	..	2	..	..	2	1	..	1	..	1	2	2	1	12
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	3	....	....	3	....	....	2	....	1	..	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	3
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	2	1	....	3	....	....	1	....	2	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	1	..	..	..	..	..	..	1	3
11. Morbilli	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	19	10	....	29	....	....	26	....	3	9	4	12	1	..	..	1	..	..	..	..	1	1	..	2	1	..	2	2	2	2	8	3	2	2	3	29
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	2	....	2	1	....	1	....	2	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	3
2. Anæmia	1	1	....	1	1	..	2	....	....	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
3. Anasarca	2	4	....	3	3	....	1	....	5	..	..	..	..	1	..	..	1	..	1	2	1	..	..	..	1	1	2	1	..	..	1	..	..	..	..	6
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Carcinoma	1	2	....	2	1	....	....	....	3	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	3
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
8. Phthisis	4	9	....	11	2	....	3	1	9	1	..	..	1	1	2	1	4	1	2	..	..	..	..	..	1	1	1	4	..	..	2	2	1	..	1	13
9. Tabes Mesenterica	1	....	....	....	1	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY CITIES IN 1894.—*Continued.*

CHATHAM.—Population, 9,334.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	30	28	....	39	19	....	25	....	33	10	7	3	3	2	4	3	4	4	2	5	6	5	..	9	4	3	8	4	4	5	5	4	5	4	3	58
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	2	6	....	8	....	....	8	..	....	8	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	..	1	1	1	..	1	..	8
2. Diseases of Parturition	....	1	....	1	....	....	....	1	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Diseases of Old Age	7	9	....	8	8	....	....	3	13	..	..	..	..	..	..	..	..	..	..	..	9	7	..	1	2	5	1	..	..	..	2	1	2	2	..	16
Total Developmental Dis's	9	16	....	17	8	....	8	4	13	8	..	..	..	..	1	..	..	..	..	..	9	7	..	3	2	6	2	1	.	1	3	2	2	3	..	25
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	....	2	....	1	1	....	1	....	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowned	3	....	....	2	1	....	2	....	1	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	3
Total Violent Deaths	3	2	....	3	2	...	3	....	2	.	1	..	2	..	..	..	..	1	..	1	..	..	..	.	..	..	1	..	2	..	1	..	..	..	1	5
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	73	74	....	108	39	....	70	5	72	31	12	15	7	5	8	5	9	6	7	10	19	13	..	15	10	11	18	13	9	9	23	12	10	9	8	147

DEATHS BY CITIES IN 1894.—*Continued.*

WINDSOR.—Population, 10,644.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	6	....	8	....	....	8	....	....	6	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	..	..	..	8
2. Cholera Morbus	....	....	..	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	4	....	5	....	....	2	2	1	..	..	..	..	1	1	..	1	1	..	..	..	..	1	..	2	1	..	..	..	1	..	..	1	..	..	5
8. Scarlatina	....	....	....	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	3	..	..	..	5
12. Whooping Cough	1	4	....	5	....	....	5	....	....	1	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
14. Variola	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
16. Other Zymotic Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	5	16	....	20	1	....	17	2	2	8	7	..	..	1	1	..	1	2	..	..	..	..	1	..	2	1	..	2	..	5	5	4	2	..	..	21
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	2
2. Anæmia	2	....	....	....	2	....	....	....	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Anasarca	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
4. Asthma	....	1	....	1	....	....	..	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	1	..	1	1	1	6
5. Carcinoma	2	4	....	2	4	....	....	3	3	..	..	..	..	..	..	..	..	..	3	1	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	.....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	11	10	....	13	6	2	5	6	10	1	..	..	..	2	5	3	3	3	1	2	1	..	..	6	2	..	2	..	1	1	3	3	1	1	1	21
9. Tabes Mesenterica	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	1	....	1	....	....	1	..	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1

DEATHS BY CITIES IN 1894.—*Continued.*

WINDSOR.—POPULATION, 10,644.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	15	18	....	18	13	2	6	12	15	1	..	1	..	2	5	3	4	4	4	6	3	..	..	7	2	2	2	..	2	3	5	4	2	3	1	33
NERVOUS DISEASES.																																			
1. Apoplexy	3	....	....	2	1	....	....	....	3	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	3
2. Convulsions	3	4	....	7	....	....	7	....	....	5	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	1	1	..	..	1	..	7
3. Encephalitis	2	3	....	4	1	..	4	....	1	1	1	..	..	1	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	2	..	5
4. Epilepsy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	1	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
6. Meningitis	5	1	....	5	1	..	6	....	....	1	2	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	1	..	..	1	6
7. Necrencephalus	1	..	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
8. Paralysis	2	2	....	....	4	...	....	2	2	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	1	1	..	1	..	..	..	1	4
Total....	16	11	..	20	7	...	17	2	8	7	4	3	..	1	2	..	1	5	2	2	..	..	..	1	3	2	1	4	4	3	3	..	..	3	3	27
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	7	14	...	8	11	2	3	11	7	..	..	..	..	1	3	..	3	3	5	3	3	..	..	..	1	4	1	1	2	2	..	3	4	1	2	21
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total....	8	14	....	9	11	2	3	11	8	..	..	..	..	1	3	..	3	4	5	3	3	..	..	..	1	1	4	1	1	2	2	..	3	4	1	2	22
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Pneumonia	7	7	....	10	4	....	9	3	2	2	5	..	1	1	1	..	1	..	..	1	2	..	..	..	2	5	2	1	..	1	1	..	..	1	1	14
3. Pleurisy	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total....	8	8	....	11	5	....	9	4	3	2	5	..	1	1	1	..	1	..	1	1	3	..	..	..	2	5	2	1	..	1	1	1	1	1	1	16

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DEATHS BY CITIES IN 1894.—*Continued.*

STRATFORD.—Population, 9,797.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	4
7. Febris Typhoides	3	1	....	3	....	1	....	1	3	..	..	..	..	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
8. Scarlatina	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	2	2	....	2	2	....	2	....	2	1	..	..	..	..	1	..	..	..	..	..	1	1	..	3	..	1	..	..	..	..	..	..	..	..	4
11. Morbilli	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
12 Whooping Cough	....	1	....	1	....	....	1	....	....	1	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	1	..	1	..	3
13. Pyæmia	2	1	....	2	....	1	1	....	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	....	....	....	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
15. Syphilis	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	9	8	....	12	3	2	8	1	8	6	..	..	1	3	1	..	2	..	..	1	2	1	..	3	..	1	3	1	1	1	3	1	..	2	1	17
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	....	....	2	....	....	....	....	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
2. Anæmia	6	3	....	8	1	....	8	1	....	7	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	2	2	3	1	..	..	9
3. Anasarca	....	1	....	....	1	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Carcinoma	1	6	....	3	4	....	....	6	1	..	..	..	..	..	..	..	..	..	3	..	2	2	..	..	..	..	2	1	1	1	..	..	..	..	2	7
6. Rheumatism and Gout	2	....	....	1	1	....	1	....	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Phthisis	5	11	..	15	1	....	5	6	5	1	1	..	1	1	4	3	..	2	1	..	1	..	1	2	1	1	..	2	2	1	2	2	..	1	2	16
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
11. Diabetes	3	....	....	2	1	....	....	....	3	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	3

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DEATHS BY CITIES IN 1894.—*Continued.*

STRATFORD.—POPULATION, 9,797.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20 25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	..	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	22	14	....	23	13	....	14	7	15	7	3	..	4	3	2	1	1	4	2	4	3	2	..	3	1	4	3	2	4	4	2	2	2	4	5	36
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	5	2	6	13	....	....	13	....	....	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	3	2	1	..	..	..	3	1	13
2. Diseases of Parturition	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	1	..	..	..	..	..	..	..	..	..	1
3. Diseases of Old Age	5	8	....	1	12	....	....	7	6	..	..	..	..	..	..	..	..	1	..	..	4	9	..	..	1	..	1	..	2	3	1	..	..	2	3	13
Total Developmental Dis's.	10	11	6	15	12	....	13	8	6	13	..	..	..	..	..	..	1	..	..	..	4	9	..	..	2	2	2	3	4	4	1	..	..	5	4	27
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Wounds and other Accidents	3	2	....	2	3	....	1	2	2	..	..	1	..	1	..	..	2	..	..	1	..	..	..	..	..	..	..	1	..	..	1	1	1	..	1	..	5
3. Murder and Homicide	....	....	....	..	....	....	....	....	....	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Lightning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths.	5	3	....	4	4	....	1	3	4	..	..	1	..	1	1	..	3	..	..	1	1	..	..	..	..	..	2	..	..	1	1	1	..	2	1	8
Cause not specified	1	....	1	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	2	..	..	..	..	..	2
Total from all causes	66	57	7	85	41	4	51	32	47	35	5	1	6	8	8	4	9	8	9	6	15	14	2	8	4	8	16	10	13	16	11	9	6	14	15	130

DEATHS BY CITIES IN 1894.—*Continued*

BELLEVILLE.—Population, 10,225.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	1	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	4
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	3	1	....	4	....	....	1	1	2	..	..	1	..	..	..	..	..	1	..	1	1	..	..	3	1	..	..	..	..	..	..	..	..	..	..	4
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	7	2	....	9	....	....	6	1	2	4	..	2	..	..	..	..	..	1	..	1	1	..	..	3	1	..	..	..	..	..	2	3	..	..	..	9
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	3	....	2	1	....	2	1	....	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	3
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Anasarca	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	....	3	....	2	1	....	....	3	....	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	3
6. Rheumatism and Gout	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	1	....	....	1	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Phthisis	9	4	....	11	2	....	4	2	7	2	..	..	1	3	3	1	1	..	1	..	1	..	..	1	5	1	..	..	1	1	..	2	1	1	..	13
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY CITIES IN 1894.—*Continued.*

BELLEVILLE.—POPULATION, 10,225.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	9	12	....	16	5	....	8	6	7	2	2	1	1	3	3	1	1	1	3	2	1	..	..	1	5	4	1	..	2	1	1	2	2	1	1	21
NERVOUS DISEASES.																																			
1. Apoplexy	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	2
2. Convulsions	....	2	....	2	....	....	1	1	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	2	1	....	2	1	....	1	1	1	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	3
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	3	3	....	2	4	....	....	3	3	..	..	..	..	..	..	..	1	..	..	..	4	1	..	..	..	..	1	1	..	..	..	3	..	1	..	6
Total	7	6	....	7	6	....	2	5	6	1	..	..	1	..	1	..	2	1	..	2	4	1	..	..	..	2	1	4	..	..	1	3	..	1	1	13
DISEASES OF CIRCULATION.																																			
1. Endocarditis	2	....	....	....	2	....	....	....	2	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
2. Pericarditis	....	1	....	....	1	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3 Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	5	1	....	3	3	....	....	1	5	..	..	..	..	..	..	1	..	1	1	2	1	..	..	..	1	..	1	..	..	..	2	..	1	..	1	6
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	3	3	....	4	2	....	1	2	3	..	..	..	1	..	..	..	1	1	..	3	..	..	..	1	..	..	1	1	..	..	1	1	..	..	1	6
Total	10	5	....	7	8	....	2	3	10	..	..	..	1	..	1	1	1	2	2	5	2	..	..	1	1	1	2	1	..	..	3	2	1	1	2	15
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
2. Pneumonia	7	7	....	10	4	....	7	2	5	3	2	1	..	..	..	..	3	1	..	1	3	..	..	3	1	1	1	..	2	..	1	..	..	1	4	14
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	8	7	....	11	4	....	8	2	5	4	2	1	..	..	..	..	3	1	..	1	3	..	..	3	1	1	1	..	2	..	1	..	..	2	4	15

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DEATHS BY CITIES IN 1894.—*Continued.*

ST. CATHARINES.—POPULATION, 9,455.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	5	2	..	7	....	....	7	....	....	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	3	..	..	7
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Dysentaria Acuta	1	....	....	1	....	....	..	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	3	2	....	5	....	....	5	....	....	..	1	3	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	1	..	..	..	..	..	1	..	5
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	1	4	....	4	1	....	1	2	2	..	..	..	..	2	..	1	..	..	..	2	..	..	..	..	..	1	..	..	..	1	2	1	..	..	5
8. Scarlatina	2	....	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	2	....	....	2	....	....	....	....	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2
11. Morbilli	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	..	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	14	9	....	22	1	....	16	2	5	5	6	3	..	2	..	1	..	..	1	2	1	1	1	2	..	2	2	1	2	1	4	5	3	1	..	23
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	1	....	2	1	....	1	1	1	..	..	1	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	1	..	..	..	1	..	3
2. Anæmia	2	6	....	5	2	1	1	2	5	..	1	..	..	..	1	..	1	1	2	2	..	..	..	1	..	..	1	1	..	1	..	2	1	..	1	8
3. Anasarca	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
4. Asthma	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Carcinoma	1	2	....	2	1	....	....	2	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	3
6. Rheumatism and Gout	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	14	9	....	16	7	....	8	3	12	2	..	1	1	1	4	3	4	1	3	2	1	..	..	3	..	2	3	2	3	4	1	1	..	4	..	23
9. Tabes Mesenterica	1	1	....	1	1	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY CITIES IN 1894.—*Continued.*

ST. CATHARINES.—Population 9,455.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	32	30	....	33	27	2	20	19	23	12	5	1	1	3	..	1	3	7	4	11	9	4	1	5	11	5	8	3	5	6	3	3	4	4	5	62
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	7	8	1	16	....	....	16	....	....	16	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	4	2	1	3	..	1	2	16
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	2	9	....	1	10	....	1	7	3	..	..	..	..	..	..	..	..	..	..	..	6	5	..	1	..	1	1	2	2	1	..	1	..	..	2	11
Total Developmental Dis's.	9	17	1	17	10	....	17	7	3	16	..	..	..	..	..	..	..	..	..	..	6	5	..	2	1	1	2	2	6	3	1	4	..	1	4	27
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
2. Wounds and other Accidents	2	2	....	4	....	....	2	....	2	..	..	1	1	1	..	1	..	..	..	..	..	..	..	..	3	..	1	..	..	..	..	..	..	..	..	4
3. Murder and Homicide	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
4. Suicide	....	....	....	....	....	....	....	...	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
5. Drowning	1	....	....	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Total Violent Deaths	5	2	....	6	1	...	3	....	4	..	..	1	1	1	1	2	1	..	..	..	..	..	..	..	3	..	1	..	1	..	..	1	1	..	..	7
Cause not specified	1	....	..	....	1	...	....	...	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total from all causes	82	79	1	105	54	3	69	38	55	37	12	8	3	7	7	7	10	9	12	17	19	12	2	14	16	12	18	9	17	17	10	17	9	12	11	162

DEATHS BY CITIES IN 1894.—*Continued.*

GUELPH.—Population, 10,865.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	1	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	3
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	1	2	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	3
4. Dysentaria Acuta	..	1	..	..	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	....	2	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
8. Scarlatina	2	1	....	3	....	....	3	....	....	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..	..	3
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	2	....	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	8	8	....	15	1	....	13	2	1	5	8	..	..	..	..	..	2	..	..	..	..	1	..	..	1	2	1	2	1	1	7	..	..	1	..	16
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	2	....	2	1	....	1	1	1	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	3
2. Anæmia	....	1	....	....	1	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Anasarca	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	2	3	....	3	2	....	1	2	2	..	..	..	..	..	..	..	1	1	2	..	1	..	..	1	..	1	..	..	1	1	..	1	..	..	..	5
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	15	2	....	14	3	...	4	1	12	1	1	..	..	6	3	1	1	4	..	..	..	..	..	2	3	..	4	1	..	1	1	3	..	..	2	17
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
11. Diabetes	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY CITIES IN 1894.—*Continued.*

GUELPH.—POPULATION, 10,865.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases	20	8	....	20	8	....	8	4	16	1	1	1	1	6	3	1	3	5	4	1	1	..	..	3	4	1	5	2	1	2	1	7	..	..	2	28
NERVOUS DISEASES.																																			
1. Apoplexy	4	1	....	2	3	....	....	1	4	..	..	..	..	..	..	..	..	..	1	2	2	..	..	2	1	..	..	..	1	..	..	..	..	1	5
2. Convulsions	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Encephalitis	2	2	....	2	2	....	2	....	2	..	..	1	..	..	1	..	..	..	..	..	2	..	..	1	1	..	..	1	1	..	..	..	..	..	..	4
4. Epilepsy	3	1	....	1	3	....	1	....	3	..	..	..	..	..	1	2	..	..	1	..	..	..	..	..	..	1	..	..	2	..	..	..	1	..	..	4
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	1	1	....	2	....	....	2	....	....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2
7. Necrencephalus	....	1	....	....	1	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
8. Paralysis	3	1	...	2	2	....	....	1	3	..	..	..	..	..	..	..	..	1	1	1	1	..	..	..	1	..	..	1	1	..	1	..	..	..	..	4
Total	13	7	....	9	11	....	6	2	12	1	..	2	..	..	2	2	..	1	3	2	5	2	..	3	3	2	..	3	4	1	..	2	1	..	1	20
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
4. Angina Pectoris	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Valvular Diseases	4	3	....	4	3	....	3	....	4	..	..	..	1	1	..	..	2	1	..	1	1	..	..	..	1	..	1	2	1	..	..	1	..	..	1	7
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	4	3	....	4	3	....	....	3	4	..	1	..	..	..	..	..	3	..	1	2	..	..	..	..	1	1	..	1	..	..	..	1	3	..	..	7
Total	10	6	....	9	7	....	3	3	10	..	1	..	1	1	..	..	5	1	1	3	3	..	..	.	2	1	1	3	1	1	..	3	3	..	1	16
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	4	....	5	1	....	5	1	....	3	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	3	1	..	..	..	..	..	..	6
2. Pneumonia	2	4	....	5	1	....	4	1	1	2	1	..	..	..	..	..	2	..	..	..	..	1	..	..	..	2	..	1	1	..	..	2	..	..	..	6
3. Pleurisy	1	....	....	1	....	..	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
4. Laryngitis	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
Total	6	8	....	12	2	....	11	2	1	6	3	..	..	..	1	..	..	2	..	..	1	1	..	..	..	3	2	4	2	..	..	2	1	..	..	14

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DEATHS BY CITIES IN 1894.—*Continued.*

ST. THOMAS.—Population, 10,688.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	7	7	....	13	1	....	14	....	....	12	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	8	..	..	..	14
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	1	....	...	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	1	2	....	3	....	....	....	2	1	..	..	..	..	..	2	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	3
8. Scarlatina	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	3	1	....	....	4	....	....	1	3	..	..	..	..	..	..	..	..	..	..	..	1	3	..	1	..	2	..	..	..	1	..	..	..	..	4
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	13	11	....	19	5	....	17	3	4	13	3	1	..	..	2	1	..	..	..	..	1	3	..	2	2	2	..	..	..	3	5	8	..	2	..	24
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	....	....	1	....	....	..	..	..	1	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
2. Anæmia	....	2	....	2	....	....	....	2	....	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
3. Anasarca	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Asthma	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
5. Carcinoma	2	5	....	3	4	....	....	4	3	..	..	..	..	..	..	..	1	2	2	2	..	..	..	1	..	..	..	1	..	3	1	..	1	..	..	7
6. Rheumatism and Gout	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	6	6	....	9	3	....	2	4	6	1	..	..	..	1	..	3	3	2	2	..	..	..	..	2	1	1	5	..	1	..	1	1	..	..	..	12
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

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DEATHS BY CITIES IN 1894.—*Continued.*

ST. THOMAS.—POPULATION, 10,688.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	20	20	....	20	20	....	12	13	15	10	1	..	..	..	1	1	3	4	3	5	9	3	..	4	5	3	6	3	2	3	2	6	1	2	3	40
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	7	7	....	14	....	....	14	....	....	14	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	2	2	1	3	2	..	..	..	..	14
2. Diseases of Parturition	....	2	....	....	2	....	....	2	....	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
3. Diseases of Old Age	4	3	....	3	3	1	....	3	4	..	..	..	..	..	..	..	..	..	..	..	..	7	..	1	2	..	..	1	..	..	1	..	1	1	..	7
Total Developmental Dis's.	11	12	....	17	5	1	14	5	4	14	..	..	..	..	..	..	2	..	..	..	..	7	..	1	4	4	2	3	1	3	3	..	1	1	..	23
VIOLENT DEATHS.																																			
1. Railroad Accidents	6	....	...	5	1	....	....	....	6	..	..	..	..	1	..	2	2	1	..	..	..	..	1	..	..	..	1	..	1	2	1	..	1	..	..	..	6
2. Wounds and other Accidents	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Drowning	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Total Violent Deaths	7	1	....	5	3	....	....	1	7	..	..	..	..	1	..	2	3	1	..	..	..	1	..	..	..	2	..	2	2	1	..	1	..	..	..	8
Cause not specified	....	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	62	58	....	77	42	1	46	33	41	38	4	1	1	2	3	7	12	9	10	8	11	14	1	13	12	12	13	9	7	13	12	17	3	6	3	120

DEATHS BY CITIES IN 1894.—*Continued.*

BRANTFORD (One case of lockjaw not included).—POPULATION, 13,150.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	10	6	....	16	....	....	16	....	....	15	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	9	4	1	..	..	..	16
2. Cholera Morbus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	2	3	....	5	....	....	5	....	....	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	1	..	..	5
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	5	5	....	10	....	....	10	....	....	1	5	4	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	2	2	..	3	10
6. Erysipelas	1	1	....	1	1	....	1	....	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	2
7. Febris Typhoides	6	3	....	7	2	....	1	....	8	..	..	..	..	1	2	2	2	..	1	..	1	..	..	..	..	..	..	..	..	1	1	2	4	1	9
8. Scarlatina	9	5	....	13	1	....	14	....	....	..	9	2	3	..	..	..	..	..	..	..	..	..	..	9	1	..	1	3	..	..	..	..	..	..	14
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	..	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	34	23	....	52	5	...	47	...	10	22	15	6	3	1	2	2	2	..	1	1	2	..	..	10	1	..	2	4	3	9	10	4	5	5	4	57
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	2	1	....	2	1	....	2	....	1	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	3
3. Anasarca	....	3	....	2	1	....	1	1	1	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	3
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	3	1	..	....	4	....	....	....	4	..	..	..	..	..	..	..	..	..	1	2	..	1	..	1	..	..	..	..	1	1	..	1	..	..	..	4
6. Rheumatism and Gout	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
7. Hydrocephalus	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
8. Phthisis	9	10	....	14	5	....	6	5	8	3	1	1	..	..	3	1	3	3	1	3	..	..	..	2	1	..	1	..	..	1	1	5	2	2	4	19
9. Tabes Mesenterica	...	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY CITIES IN 1894.—*Continued.*

BRANTFORD (One case of lockjaw not included).—POPULATION, 13,150.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	15	16	....	20	11	....	10	6	15	5	2	2	..	..	3	1	4	3	4	6	..	1	..	3	2	..	1	2	1	3	2	6	3	2	6	31
NERVOUS DISEASES.																																			
1. Apoplexy	2	1	....	2	1	....	1	..	2	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	2	..	..	3
2. Convulsions	2	6	....	7	1	.	5	2	1	1	3	..	1	1	..	1	1	..	..	..	..	..	..	1	1	..	..	1	..	1	..	1	1	1	1	8
3. Encephalitis	3	2	....	3	2	...	2	....	3	..	1	..	1	..	..	..	..	1	1	..	1	..	..	..	..	..	..	2	..	..	..	..	1	2	5
4. Epilepsy	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	1	2	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	3
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	6	4	...	1	9	....	1	4	5	1	..	..	..	..	..	..	..	..	3	2	3	1	..	1	..	3	..	2	..	..	..	..	..	4	..	10
Total	15	16	....	16	15	....	12	7	12	3	7	..	2	1	..	1	1	2	5	3	5	1	..	2	3	3	1	5	1	1	..	3	3	6	3	31
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
2. Pericarditis	....	2	....	1	1	....	1	1	....	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	3	....	3	1	....	2	2	...	..	..	..	1	1	..	..	..	..	..	1	1	..	..	..	2	1	..	..	..	..	..	..	..	1	..	4
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	6	7	....	8	4	1	2	5	6	1	..	1	..	..	1	.	2	3	1	4	..	..	..	2	1	2	..	1	..	2	..	1	1	1	2	13
Total	7	13	....	13	6	1	5	9	6	1	..	1	2	1	1	1	..	2	3	3	5	..	..	2	1	6	1	1	.	2	..	1	1	3	2	20
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	1	....	1	....	....	1	..	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Pneumonia	3	3	....	4	1	1	3	2	1	..	1	2	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	1	2	..	..	..	1	..	2	6
3. Pleurisy	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
4. Laryngitis	2	1	....	3	....	....	2	....	1	..	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	..	3
Total	6	5	....	9	1	1	7	2	2	1	3	3	..	..	..	1	1	..	..	..	1	1	..	..	..	..	..	3	3	..	..	..	1	1	..	3	11

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DEATHS BY CITIES IN 1894.—*Continued.*

KINGSTON.—POPULATION, 19,864.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	8	....	12	....	....	12	....	....	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	7	2	2	..	..	..	12
2. Cholera Morbus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	3	1	..	..	3	1	....	1	3	..	..	..	..	..	..	..	..	..	..	..	2	2	..	1	..	..	..	..	1	1	..	1	..	..	4
5. Diphtheria and Croup (Cynanche Trachealis)	2	3	...	5	..	....	5	....	....	..	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	5
6. Erysipelas	....	3	....	1	1	1	....	2	1	..	..	..	..	..	..	..	1	..	..	..	2	..	..	1	..	1	1	..	..	..	..	..	..	..	..	3
7. Febris Typhoides	1	3	....	4	....	....	3	1	....	..	..	1	..	1	1	..	..	..	1	..	..	..	..	..	1	2	..	..	..	1	..	..	..	..	..	4
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	3	4	....	1	4	2	....	3	4	..	..	..	..	..	1	..	1	..	1	1	2	1	..	1	2	..	1	..	1	..	..	..	..	2	7
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	1	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	14	23	....	24	9	4	21	7	9	12	4	3	..	1	2	..	2	..	2	2	6	3	..	3	3	4	2	..	1	9	4	2	1	2	6	37
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	5	....	4	3	....	2	2	3	..	..	1	..	..	..	..	1	2	1	..	2	..	..	3	1	..	..	1	1	1	..	..	..	..	..	7
2. Anæmia	2	1	...	1	2	....	..	1	2	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	3
3. Anasarca	3	2	....	1	2	2	1	1	3	..	..	..	1	..	..	..	1	..	..	2	1	..	..	..	..	..	1	..	1	1	..	..	1	1	..	5
4. Asthma	....	1	...	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Carcinoma	8	7	....	5	10	....	....	6	9	..	..	..	..	..	..	..	..	1	5	5	3	..	1	2	..	2	..	2	1	3	..	2	1	..	2	15
6. Rheumatism and Gout	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	1	..	..	..	1	..	..	1	..	3
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	15	18	...	26	6	1	15	4	14	2	1	2	3	1	9	5	2	6	..	..	2	..	..	2	2	1	2	2	3	1	7	4	2	4	3	33
9. Tabes Mesenterica	2	1	....	3	....	....	1	..	2	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	3
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	3	1	....	2	2	....	....	1	3	..	..	..	..	..	1	..	1	..	..	..	1	1	..	..	..	..	1	..	..	..	2	..	1	..	..	4

12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Constitut'l Diseases	36	38	....	43	28	3	19	18	37	3	1	3	4	1	10	5	7	10	6	10	11	1	2	7	3	5	4	6	6	6	10	10	6	5	6	74
NERVOUS DISEASES.																																								
1. Apoplexy	6	....	....	1	4	1	....	....	6	..	..	..	..	..	..	..	1	1	1	1	2	..	..	..	..	1	1	2	..	..	..	1	..	1	..	6
2. Convulsions	3	2	....	4	1	....	4	1	....	2	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	1	..	..	1	5
3. Encephalitis	5	4	....	8	....	1	6	1	2	4	..	2	..	1	..	1	1	..	..	..	..	..	..	..	1	2	2	1	1	..	..	..	2	..	..	9
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	4	2	....	5	1	....	4	....	2	1	3	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	2	6
7. Necrencephalus	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	10	6	....	5	10	1	....	7	9	..	..	..	..	..	..	..	..	3	7	3	3	..	1	..	2	1	..	1	1	1	2	3	3	1	16
Total	29	14	....	24	16	3	14	9	20	7	5	2	..	1	1	2	2	2	4	8	4	5	..	1	2	5	6	3	3	2	2	5	6	4	4	43
DISEASES OF CIRCULATION.																																								
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	6	3	....	....	9	....	....	3	6	..	..	..	..	..	..	1	..	1	2	2	2	..	1	..	1	..	..	2	2	1	..	2	..	..	1	9
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	4	....	....	3	1	....	....	....	4	..	..	..	..	..	..	..	..	..	3	1	..	..	..	1	..	..	..	1	..	..	1	..	1	..	..	4
Total	11	3	....	3	11	....	....	3	11	..	..	..	..	..	..	1	..	2	5	3	2	..	1	1	1	..	..	3	2	1	2	2	1	..	1	14
DISEASES OF RESPIRATION.																																								
1. Bronchitis	4	7	....	7	4	....	6	4	1	6	..	..	..	..	..	..	..	2	..	2	1	..	..	2	..	1	..	..	1	2	1	..	1	1	2	11
2. Pneumonia	11	11	....	10	11	1	6	6	10	..	3	..	1	1	1	2	3	4	2	5	..	..	..	4	3	4	3	2	1	..	..	..	2	3	22
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	15	18	....	17	15	1	12	10	11	6	3	..	1	1	1	2	3	6	2	7	1	..	2	4	4	4	3	3	3	1	..	1	3	5	33
DISEASES OF DIGESTION.																																								
1. Dyspepsia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Enteritis	1	2	....	....	2	1	1	1	1	..	..	..	..	1	..	..	..	1	1	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	3
3. Gastritis	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
4. Hepatitis	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
5. Peritonitis	2	1	....	2	1	....	....	....	3	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	3
6. Diseases of Pancreas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Diseases of Spleen	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Other Intestinal Diseases	....	2	....	....	2	....	....	2	....	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Total	5	6	....	2	8	1	1	4	6	..	..	..	..	1	..	1	..	5	2	2	..	..	1	1	2	..	1	..	2	..	1	..	1	..	2	11
DISEASES OF URINARY ORGANS.																																								
1. Nephria	3	3	....	3	2	1	....	3	3	..	..	..	..	..	..	1	..	2	1	2	..	..	..	..	2	..	..	3	..	1	..	..	..	..	..	6
2. Cystitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Calculus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Other Urinary Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	3	3	..	3	2	1	....	3	3	..	..	..	..	..	..	1	..	2	1	2	..	..	..	..	2	..	..	3	..	1	..	..	..	..	..	6

DEATHS BY CITIES IN 1894.—*Continued.*

KINGSTON.—POPULATION, 19,864.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	63	44	....	49	52	6	27	29	51	13	8	2	..	3	2	6	4	9	21	17	15	6	1	5	10	11	10	13	8	9	5	8	8	8	12	107
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	13	8	....	21	....	....	21	....	....	21	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	2	1	1	1	2	1	5	1	1	1	21
2. Diseases of Parturition	....	2	....	....	2	....	....	2	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2
3. Diseases of Old Age	14	13	....	1	22	4	....	8	19	..	..	..	..	..	..	1	..	1	..	..	..	10	17	..	2	1	2	2	2	1	1	4	2	2	5	2	27
Total Developmental Dis's.	27	23	..	22	24	4	21	10	19	21	..	..	..	..	..	1	..	1	..	..	..	10	17	..	4	4	4	3	3	2	3	5	7	5	6	4	50
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Wounds and other Accidents	4	2	....	3	3	..	1	1	4	..	1	..	..	..	..	2	2	..	..	..	..	1	..	..	1	..	..	1	2	..	1	..	1	..	..	6
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowned	3	....	....	2	1	....	3	....	....	..	..	..	1	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	3
6. Street Railway Accidents	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total Violent Deaths	9	2	....	6	5	....	5	1	5	..	1	1	1	2	..	2	2	..	..	1	..	1	..	1	1	..	..	1	3	..	1	1	1	1	1	11
Cause not specified	....	2	....	1	....	1	....	....	2	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	2
Total from all causes	149	132	....	145	118	18	93	65	123	49	14	9	5	7	15	13	17	19	29	30	42	28	4	20	21	24	19	24	20	27	25	29	21	22	29	281

DEATHS BY CITIES IN 1894.—*Continued.*

LONDON*.—POPULATION, 32,976.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	8	12	....	19	1	....	20	....	....	19	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	5	8	5	1	..	..	20
2. Cholera Morbus	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
3. Diarrhœa Acuta	1	2	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	3
4. Dysentaria Acuta	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	1	2
5. Diphtheria and Croup (Cynanche Trachealis)	24	24	....	44	3	1	47	1	....	1	32	9	4	..	..	..	1	..	..	..	..	..	1	19	7	5	2	3	..	..	1	1	..	4	6	48
6. Erysipelas	..	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	4	3	....	6	1	....	1	2	4	..	..	1	..	1	..	2	1	1	..	1	..	..	..	1	..	1	..	..	..	1	..	..	2	..	2	7
8. Scarlatina	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	4	....	....	3	1	....	3	1	..	..	..	..	..	..	..	1	..	..	1	2	..	..	3	..	..	..	..	..	..	..	..	..	..	1	4
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	2	2	....	1	3	....	....	1	3	..	..	..	..	..	1	..	2	..	..	1	..	..	..	1	1	..	1	..	..	..	..	..	1	..	..	4
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.. ..
Total Zymotic Diseases	42	49	....	77	12	2	74	8	9	22	37	10	4	1	1	2	5	1	..	3	2	2	1	26	8	7	3	3	..	8	12	6	4	4	10	91
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	1	5	....	5	1	....	4	2	....	..	1	1	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2	..	2	1	..	1	6
2. Anæmia	3	3	....	3	3	....	4	....	2	4	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	3	1	..	..	1	6
3. Anasarca	2	1	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	3
4. Asthma	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	2
5. Carcinoma	6	14	..	7	13	....	..	9	11	..	..	..	..	..	..	..	3	2	7	5	2	1	..	1	..	1	3	3	3	4	1	..	1	1	2	20
6. Rheumatism and Gout	....	3	....	....	3	....	....	....	3	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	3
7. Hydrocephalus	2	1	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	3
8. Phthisis	30	24	....	32	22	....	17	6	31	11	1	2	1	4	8	6	8	7	4	1	1	..	..	6	5	2	3	7	1	7	3	7	10	2	1	54
9. Tabes Mesenterica	1	1	....	2	....	....	1	....	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	2	....	2	1	....	....	....	3	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	3

DEATHS BY CITIES IN 1894.—*Continued.*

LONDON*.—POPULATION, 32,976.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	1	..	..	..	.	..	..	..	..	..	.	..	1	..	..	..	..	..	..	..	..	1
Total Constitut'l Diseases	48	55	....	55	48	....	29	19	55	18	2	3	2	6	12	8	11	11	17	8	4	1	..	8	6	5	8	16	8	15	9	8	11	4	5	103
NERVOUS DISEASES.																																			
1. Apoplexy	7	7	....	4	10	....	3	5	6	1	..	..	..	1	..	..	1	..	1	3	5	2	..	2	1	1	..	1	2	..	1	2	2	1	1	14
2. Convulsions	6	8	....	14	....	....	14	....	....	12	2	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	2	2	..	2	1	1	2	14
3. Encephalitis	3	3	....	5	1	....	3	1	2	1	1	..	..	..	..	..	2	..	2	..	..	..	..	..	1	..	1	.	..	..	2	1	1	..	..	6
4. Epilepsy	1	1	....	1	1	....	1	....	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	6	2	....	6	2	....	7	....	1	3	3	1	..	..	1	..	..	..	..	..	..	..	..	1	..	1	1	1	1	..	1	1	..	..	1	8
7. Necrencephalus	....	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	8	16	....	6	18	....	....	10	14	..	..	..	..	..	..	..	..	3	2	5	9	5	..	4	5	..	2	..	3	2	1	2	1	..	4	24
Total	31	38	....	36	33	....	28	16	25	17	7	1	..	1	1	..	4	3	5	9	14	7	..	9	10	2	4	2	9	4	6	8	5	2	8	69
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	2	....	2	....	....	2	....	....	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	2
2. Pericarditis	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
3. Hypertrophy of Heart	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	5	11	....	5	11	....	2	8	6	..	1	..	..	1	..	1	3	2	..	4	3	1	..	1	1	1	1	2	2	1	1	1	4	..	1	16
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	4	4	....	4	4	....	1	1	6	..	..	..	1	.	1	1	2	2	..	1	..	..	..	2	..	..	1	1	..	..	1	1	1	..	1	8
Total	9	19	....	12	16	....	5	11	12	..	1	1	2	1	1	2	5	5	..	6	3	1	..	3	3	1	2	3	2	1	2	2	6	..	3	28
DISEASES OF RESPIRATION.																																			
1. Bronchitis	5	5	....	6	4	....	5	2	3	3	3	..	..	..	..	..	..	..	1	2	..	1	..	..	2	1	1	1	..	1	1	1	1	1	..	10
2. Pneumonia	20	12	....	15	17	....	8	4	20	3	2	1	..	..	..	1	4	6	2	4	7	2	..	7	3	5	1	2	3	3	2	1	1	3	1	32
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	2	....	2	....	....	2	....	....	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
Total	25	19	....	23	21	....	15	6	23	6	5	1	..	1	..	1	4	7	3	6	7	3	..	7	5	6	3	3	3	4	3	2	1	5	1	44

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DEATHS BY CITIES IN 1894.—*Continued.*

CITY OF OTTAWA*.—POPULATION, 45,535.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	18	10	..	28	....	....	28	....	....	24	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	5	16	5	..	..	..	1	28
2. Cholera Morbus	....	1	..	1	....	....	....	....	1	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
3. Diarrhœa Acuta	79	52	..	129	....	2	129	....	2	109	22	..	..	..	..	..	..	..	..	..	..	..	..	7	2	4	6	7	19	28	28	13	9	5	3	131
4. Dysentaria Acuta	....	1	..	....	1	....	....	1	....	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	56	68	..	124	....	....	122	....	2	6	62	43	10	2	..	..	..	..	..	1	..	..	..	7	17	15	8	5	9	4	2	10	16	24	7	124
6. Erysipelas	1	2	..	2	1	....	2	....	1	2	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	1	..	..	3
7. Febris Typhoides	10	8	..	16	2	....	7	1	10	1	4	..	..	..	4	..	3	2	4	..	..	..	..	..	2	1	..	2	4	4	1	2	2	..	..	18
8. Scarlatina	8	11	..	17	2	....	16	....	3	....	10	6	1	..	1	1	..	..	..	..	..	..	..	1	1	2	5	2	1	2	..	1	1	3	..	19
9. Puerperal Fever	....	....	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	6	4	..	8	2	....	3	1	6	2	1	..	..	..	..	..	..	1	..	2	4	..	..	1	4	2	1	..	..	1	..	..	..	..	1	10
11. Morbilli	3	2	..	5	....	....	5	....	....	3	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	1	5
12. Whooping Cough	5	6	..	11	....	....	11	....	....	6	5	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	4	1	1	1	3	11
13. Pyæmia	5	2	..	3	3	1	....	1	6	....	....	..	..	..	1	..	2	3	1	..	..	..	..	1	..	1	..	2	2	..	..	..	..	..	1	7
14. Variola	....	....	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	1	1	..	2	....	....	1	....	1	2	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2
16. Other Zymotic Diseases	2	....	..	2	....	....	....	....	2	....	....	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
Total Zymotic Diseases	194	168	..	348	11	3	324	4	34	155	109	50	11	2	6	2	6	6	5	4	6	..	..	18	26	26	21	20	42	60	40	28	31	33	17	362
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	3	5	..	6	2	....	3	2	3	....	1	..	1	..	..	1	..	3	1	1	..	..	..	1	1	..	..	..	..	1	..	1	..	..	4	8
2. Anæmia	25	17	..	39	3	....	36	....	6	26	9	1	..	..	..	..	..	1	1	4	..	..	..	4	4	3	1	4	6	5	6	4	..	4	1	42
3. Anasarca	6	17	..	15	5	3	2	5	16	....	2	..	..	..	..	1	1	1	7	2	4	5	..	3	1	2	1	..	1	..	3	4	2	1	5	23
4. Asthma	....	2	..	2	....	....	....	2	....	....	....	..	..	..	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2
5. Carcinoma	9	10	..	12	5	2	1	2	16	....	..	..	..	..	..	..	2	3	6	4	3	..	1	2	1	1	3	..	2	1	1	3	2	1	2	19
6. Rheumatism and Gout	3	....	..	1	2	....	....	....	3	....	....	..	..	1	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	1	3
7. Hydrocephalus	....	1	..	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
8. Phthisis	43	55	..	90	7	1	26	7	65	5	3	3	4	8	10	12	21	17	10	3	1	1	..	7	6	10	3	7	7	8	15	6	6	9	14	98
9. Tabes Mesenterica	....	....	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	4	2	..	3	3	....	....	....	6	....	....	..	..	..	..	..	..	2	2	1	1	..	..	1	1	..	..	1	..	..	..	..	..	..	..	6

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DEATHS BY CITIES IN 1894.—*Continued.*

CITY OF OTTAWA*.—POPULATION, 45,535.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . .
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . .
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . .
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	189	134	....	271	45	7	173	16	134	77	63	19	10	7	7	7	22	22	19	28	31	7	4	28	28	37	31	28	26	24	26	21	21	24	29	323
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	52	35	....	87	....	....	87	....	....	87	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	18	5	9	13	8	4	6	6	2	5	87
2. Diseases of Parturition	....	9	....	8	1	....	....	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	2	2	..	..	3	..	1	..	9
3. Diseases of Old Age	27	24	....	23	26	2	1	6	44	..	..	..	..	..	1	2	1	3	2	..	..	22	29	..	5	..	7	7	3	3	..	8	..	8	3	7	51
Total Developmental Dis's.	79	68	...	118	27	2	88	9	50	87	..	..	..	1	2	1	3	2	.	.	22	29	..	10	7	25	12	14	18	8	12	9	14	6	12	147
VIOLENT DEATHS.																																			
1. Railroad Accidents	3	....	....	3	....	....	1	....	2	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	3
2. Wounds and other Accidents	8	1	....	8	1	....	3	....	6	..	1	..	1	1	3	..	..	2	..	..	1	..	..	..	1	..	..	..	1	1	2	..	2	2	..	9
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	1	....	...	1	....	...	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
5. Drowning	9	....	....	6	3	....	2	....	7	..	..	1	1	2	..	1	1	..	1	2	..	..	..	..	..	..	..	..	7	2	..	..	..	..	..	9
6. Street Railway Accidents	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total Violent Deaths	21	2	....	19	4	....	7	....	16	..	2	2	2	4	4	1	1	3	1	2	1	..	.	..	1	..	2	1	8	3	2	..	3	3	..	23
Cause not specified	7	3	....	9	1	...	3	1	6	1	..	2	..	..	..	..	2	2	1	2	..	..	..	2	..	1	2	..	..	1	..	..	2	1	1	10
Total from all causes	583	483	...	933	115	18	663	48	355	352	188	77	28	23	29	25	59	62	53	53	70	42	5	77	76	106	75	75	110	112	106	76	82	82	89	1066

* One case of lockjaw not included.

DEATHS BY CITIES IN 1894.—*Continued.*

HAMILTON.*—Population, 50,512.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	7	6	....	13	....	....	13	....	....	12	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	6	4	..	..	..	13
2. Cholera Morbus	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Diarrhœa Acuta	10	5	....	15	....	....	15	....	....	10	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	5	4	2	..	..	1	15
4. Dysentaria Acuta	3	1	....	1	3	..	....	....	4	..	..	..	..	..	1	..	..	..	..	1	1	1	..	..	..	1	..	1	..	..	2	..	..	..	..	4
5. Diphtheria and Croup (Cynanche Trachealis)	41	31	....	67	5	..	71	..	1	3	29	33	7	..	..	..	..	..	..	..	..	..	..	..	10	7	6	3	5	5	4	3	7	7	10	5	72
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	7	2	....	8	1	....	1	....	8	..	..	..	..	1	2	2	2	..	2	..	..	..	..	..	1	..	..	1	..	..	..	1	2	1	1	2	9
8. Scarlatina	1	1	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2
9. Puerperal Fever	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
10. Influenza	1	4	....	1	4	....	....	....	5	..	..	..	..	..	..	..	..	..	1	..	3	1	..	..	3	..	..	..	..	..	..	..	..	..	..	2	5
11. Morbilli	1	....	....	1	....	..	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
12. Whooping Cough	1	1	..	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
13. Pyæmia	1	4	....	3	1	1	....	....	5	..	..	..	..	1	..	1	..	2	1	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	1	..	5
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	3	....	2	1	....	1	....	2	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	3
16. Other Zymotic Diseases	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2
Total Zymotic Diseases	76	59	....	116	18	1	106	....	29	26	39	34	7	1	4	4	6	..	5	3	4	2	..	15	11	8	6	7	10	12	16	17	9	15	9	135
CONSTITUTIONAL DISEASES.																																				
1. Abscess or Tumor	5	8	....	4	9	....	1	....	12	1	..	..	..	..	1	1	3	1	2	1	3	..	..	1	..	1	2	1	..	2	..	2	1	..	3	13
2. Anæmia	3	9	....	7	4	1	5	....	7	2	1	1	1	..	..	1	..	..	..	5	1	..	..	1	3	..	2	..	..	1	2	3	..	..	..	12
3. Anasarca	1	1	....	2	....	....	2	....	....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
4. Asthma	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Carcinoma	6	7	....	5	6	2	2	....	11	2	..	..	..	..	..	1	..	2	2	3	2	1	..	..	..	1	..	1	3	..	2	1	..	3	2	13
6. Rheumatism and Gout	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	2
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
8. Phthisis	41	39	....	61	16	3	21	....	59	13	4	1	2	2	14	9	13	6	7	7	1	1	..	7	5	3	8	3	5	6	9	11	8	4	11	80
9. Tabes Mesenterica	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	2	1	....	2	....	1	1	....	2	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	..	3

DEATHS BY CITIES IN 1894.—*Continued.*

HAMILTON.*—Population, 50,512.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-35.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	2	2	....	1	3	....	....	....	4	..	..	..	..	..	..	..	1	..	1	2	..	..	..	..	..	..	1	..	..	..	2	..	1	..	4
Total Constitut'l Diseases	65	67	....	86	39	7	35	....	97	20	7	3	4	2	15	12	18	9	12	20	7	2	1	10	8	5	15	5	9	11	13	19	10	9	18	132
NERVOUS DISEASES.																																				
1. Apoplexy	4	9	....	3	10	....	....	....	13	..	..	..	..	..	..	..	..	2	1	3	7	..		2	1	..	..	2	3	1	..	..	1	1	2	13
2. Convulsions	6	9	....	15	....	....	15	....	....	14	1	..	..	..	..	..	..	..	..	..	..	..		..	..	1	1	2	1	3	3	..	..	..	4	15
3. Encephalitis	7	4	....	7	4	...	8	....	3	3	4	..	1	..	1	..	..	..	2	..	..	..		..	1	1	2	..	1	2	3	..	..	1	.	11
4. Epilepsy	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..
6. Meningitis	13	12	....	23	2	....	16	....	9	8	5	2	3	3	2	..	..	1	..	..	..	1	..	1	3	1	1	2	1	4	6	3	1	1	1	25
7. Necrencephalus	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	7	5	....	5	6	1	1	....	11	..	..	1	..	..	1	..	1	..	2	4	3	..	..	1	..	..	..	1	2	..	2	2	..	1	3	12
Total	37	40	....	54	22	1	40	....	37	25	10	3	4	3	4	..	1	1	4	7	7	8	..	5	5	3	4	7	8	10	14	5	2	4	10	77
DISEASES OF CIRCULATION.																																				
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..
2. Pericarditis	..	1	....	...	1	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..		..	..	..	..	..	..	..	..	..	1	..	..	1
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..
5. Valvular Diseases	19	16	....	13	21	1	6	....	29	2	1	3	2	..	1	1	3	2	5	8	5	2	..	5	5	5	2	5	..	2	3	1	5	1	1	35
6. Aneurism	1	1	....	....	2	....	....	....	2	..	..	..	..	..	..	..	..	1	1	..	..	..		..	1	1	..	..	..	..	..	..	..	..	..	2
7. Syncope	4	4	....	3	5	...	3	....	5	1	..	1	..	..	..	1	..	1	1	2	1	..	..	3	1	2	..	..	1	..	1	..	..	..	..	8
Total	24	22	....	16	29	1	9	....	37	3	1	4	2	..	1	2	4	4	7	10	6	2	..	8	7	8	2	5	1	2	4	1	6	1	1	46
DISEASES OF RESPIRATION.																																				
1. Bronchitis	19	15	....	23	10	1	20	..	14	10	9	1	..	..	..	..	..	1	..	3	6	4		2	3	4	10	5	3	..	2	2	1	1	1	34
2. Pneumonia	23	25	....	38	10	....	21	....	27	12	6	3	..	2	1	1	3	1	5	9	3	2	..	7	2	9	9	10	1	2	1	1	..	2	4	48
3. Pleurisy	1	2	....	1	2	....	....	....	3	..	..	..	1	..	1	..	..	..	1	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	3
4. Laryngitis	1	1	....	2	....	....	2	....	....	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
Total	44	43	...	64	22	1	43	....	44	22	15	6	1	2	2	1	3	2	6	12	9	6	..	10	5	15	19	17	4	2	3	3	1	3	5	87

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DEATHS BY CITIES IN 1894.—*Continued.*

TORONTO.—Population, 192,118.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.													Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	56	75	1	128	3	1	132	....	....	118	14	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	3	46	47	19	8	2	3	132
2. Cholera Morbus	5	2	..	1	6	..	1	2	4	..	1	..	..	..	..	..	..	3	2	1	..	..	..	..	2	..	..	1	..	..	3	1	..	..	..	7
3. Diarrhœa Acuta	17	17	..	31	3	..	31	....	3	18	11	..	..	..	..	..	1	2	..	1	1	..	..	1	1	..	..	..	2	15	10	1	3	1	..	34
4. Dysentaria Acuta	1	3	..	3	1	..	....	1	3	....	....	1	..	..	..	..	....	1	..	1	1	..	..	..	..	..	..	..	..	..	1	3	..	..	..	4
5. Diphtheria and Croup (Cynanche Trachealis)	54	56	..	104	2	4	105	2	3	11	60	27	4	..	1	3	1	2	1	..	..	..	..	12	10	7	11	14	5	2	4	4	7	20	14	110
6. Erysipelas	3	3	..	3	3	..	2	1	3	1	1	..	1	..	..	..	1	1	1	..	..	..	..	1	..	1	..	1	1	..	..	..	..	1	1	6
7. Febris Typhoides	20	25	..	31	13	1	17	5	23	....	1	4	4	5	7	9	9	2	1	1	2	..	..	1	1	.	6	3	2	1	2	6	10	6	7	45
8. Scarlatina	32	36	..	66	1	1	64	2	2	3	32	26	4	1	..	1	1	..	..	..	..	..	..	8	6	5	15	13	6	5	1	2	4	3	..	68
9. Puerperal Fever	....	3	..	2	1	..	....	3	....	....	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	3
10. Influenza	7	10	..	7	10	..	4	6	7	1	2	1	1	2	..	..	2	1	1	1	4	..	1	9	..	2	2	..	..	..	..	1	..	..	3	17
11. Morbilli	3	5	..	8	....	..	8	....	....	....	7	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	2	1	..	2	..	..	..	..	..	8
12. Whooping Cough	4	1	..	5	....	..	5	....	....	4	....	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	..	..	..	3	5
13. Pyæmia	2	3	..	4	1	..	2	1	2	....	....	..	1	1	..	1	1	..	1	..	..	..	..	1	1	..	2	1	..	..	..	..	..	..	..	5
14. Variola	....	....	..	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	3	4	..	7	....	..	6	1	....	6	....	..	..	..	..	..	....	1	..	..	..	..	..	..	1	..	1	..	..	1	..	..	4	..	..	7
16. Other Zymotic Diseases	1	1	..	....	2	..	1	....	1	....	....	..	..	..	..	..	....	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
Total Zymotic Diseases	208	244	1	400	46	7	378	24	51	162	129	60	14	10	8	15	16	17	7	5	8	..	2	34	24	20	41	34	20	73	68	37	36	34	32	452
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	13	16	..	16	10	3	11	6	12	2	3	1	..	2	4	1	3	2	7	..	2	..	2	6	2	4	3	2	2	2	2	2	..	2	2	29
2. Anæmia	16	22	..	19	14	5	14	7	17	....	6	..	2	2	1	..	5	5	7	10	..	..	..	4	6	1	3	1	1	3	5	4	4	3	3	38
3. Anasarca	5	9	..	9	5	..	4	3	7	2	1	..	..	..	1	..	1	..	2	1	4	..	1	1	..	2	2	1	1	2	1	1	2	1	..	14
4. Asthma	1	....	..	1	....	..	....	1	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
5. Carcinoma	26	59	..	24	58	3	6	34	45	....	....	2	..	..	2	..	10	8	22	24	15	1	1	9	4	10	9	3	8	6	6	7	8	8	7	85
6. Rheumatism and Gout	2	5	..	3	4	..	2	2	3	....	....	..	2	1	..	..	1	..	1	2	..	..	..	..	..	..	..	..	1	3	2	..	..	1	..	7
7. Hydrocephalus	6	8	..	14	....	..	14	....	....	8	4	1	1	..	..	..	....	..	..	..	..	..	..	1	1	..	1	..	3	2	1	1	2	1	1	14
8. Phthisis	216	226	..	314	118	10	192	59	191	107	12	5	9	30	51	57	83	38	29	11	5	2	3	30	31	46	22	46	39	35	37	40	48	31	37	442
9. Tabes Mesenterica	7	3	..	9	....	1	7	2	1	6	1	..	..	1	..	..	....	1	..	1	..	..	..	1	..	1	..	..	1	1	..	3	1	1	1	10
10. Other Tubercular Diseases	1	2	..	3	....	..	....	1	2	....	....	..	..	..	..	2	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	3
11. Diabetes	6	4	..	6	3	1	3	2	5	..	1	..	1	..	2	..	1	1	2	2	..	..	..	..	1	..	1	..	..	..	..	4	2	1	1	10

12. Other Constitutional Diseases	...	3	..	1	2	.	1	1	1	....	....	..	..	..	..	..	....	1	1	..	..	..	1	..	1	..	..	1	..	..	..	..	1	..	..		3
Total Constitut'l Diseases.	299	357	..	419	214	23	254	118	284	125	28	9	15	36	61	60	104	57	72	51	27	3	8	52	47	64	41	55	58	53	52	63	68	51	52		656
NERVOUS DISEASES.																																					
1. Apoplexy	47	28	..	20	44	11	4	10	61	....	1	1	..	.	2	2	4	6	13	15	23	6	2	7	7	7	6	5	7	2	7	9	8	5	5		75
2. Convulsions	48	32	1	79	1	1	80	....	1	55	23	2	..		1	..	....	..	..	..	..	..	..	5	8	10	10	8	9	7	8	5	6	1	4		81
3. Encephalitis	9	5	..	11	3	..	9	1	4	9	1	..	..	..	..	..	1	1	1	1	..	..	..	.	1	3	..	2	1	2	1	..	2	2		14
4. Epilepsy	3	3	..	3	3	..	3	....	3	....	2	..	..	..	..	..	....	3	..	1	..	..	..	.	1	..	3	..	..	..	1	..	1	..	..		6
5. Insanity	3	1	..	1	3	..	1	....	3	....	..	..	..	..	..	1	....	1	1	1	..	..	..	1	..	..	..	..	..	1	..	..	1	1	..		4
6. Meningitis	54	54	..	95	8	5	95	....	13	47	30	9	5	4	2	3	2	1	1	..	1	..	3	8	10	8	11	14	7	8	13	8	7	11	3		108
7. Necrencephalus	6	2	..	2	6	..	....	....	8	....	....	..	..	..	..	..	2	..	1	2	2	1	..	..	..	2	..	1	..	2	1	..	..	1	1		8
8. Paralysis	37	19	..	19	33	4	2	8	46	....	....	1	..	1	2	1	3	9	12	16	7	3	1	4	4	6	4	4	3	4	4	2	6	7	8		56
Total....	207	144	1	230	101	21	194	19	139	111	57	13	5	5	7	7	12	21	29	36	33	10	6	25	31	36	34	32	28	25	36	25	29	28	23		352
DISEASES OF CIRCULATION.																																					
1. Endocarditis	3	10	..	9	3	1	6	3	4	....	....	3	1	2	..	1	1	3	2	..	..	..	..	1	1	4	1	..	1	2	1	..	..	2	..		13
2. Pericarditis	2	3	..	2	2	1	3	....	2	....	1	..	..	2	..	..	1	..	..	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	3		5
3. Hypertrophy of Heart	..	....	..	....	....	..	....	....	....	....	....	..	..	..	..	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		....
4. Angina Pectoris	1	....	..	1	....	..	....	....	1	....	....	..	..	..	..	..	....	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..		1
5. Valvular Diseases	52	45	..	32	60	5	7	23	67	....	....	1	1	6	3	6	12	3	21	23	17	2	2	13	7	9	10	10	8	4	5	7	7	6	11		97
6. Aneurism	4	5	..	2	5	2	....	3	6	....	....	..	..	..	..	..	....	3	1	2	2	..	1	..	1	..	..	1	..	1	..	1	..	3	..	2	1		9
7. Syncope	9	13	..	10	10	2	6	3	13	....	....	1	4	1	1	2	4	1	2	6	..	..	..	2	1	4	3	1	3	1	1	1	3	1	1		22
Total....	71	76	..	56	80	11	22	32	93	....	1	5	6	11	4	9	18	10	27	32	19	2	3	16	10	17	15	14	12	8	7	11	10	11	16		147
DISEASES OF RESPIRATION.																																					
1. Bronchitis	50	43	..	59	34	..	55	8	30	42	10	..	2	..	..	..	....	1	4	11	13	8	2	6	6	19	13	16	10	3	4	6	2	3	5		93
2. Pneumonia	66	91	..	83	66	8	69	21	67	35	25	6	1	2	5	3	12	13	13	21	14	4	3	21	12	25	27	15	9	5	7	7	4	9	16		157
3. Pleurisy	2	4	..	2	3	1	1	1	4	....	2	1	..	..	..	..	....	..	..	..	2	1	..	..	1	..	..	..	..	3	..	1	1	..	..		6
4. Laryngitis	6	....	..	6	....	..	5	....	1	2	....	1	..	..	..	..	....	1	2	..	..	..	..	..	..	2	1	..	1	..	..	1	1	..		6
Total....	124	138	..	150	103	9	130	30	102	79	37	8	3	2	5	3	12	15	19	32	29	13	5	27	19	44	42	32	19	12	11	14	8	13	21		262
DISEASES OF DIGESTION.																																					
1. Dyspepsia	..	....	..	....	....	..	....	....	....	....	....	..	..	..	..	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		....
2. Enteritis	25	18	..	35	7	1	34	3	6	24	6	1	2	..	1	..	1	1	2	1	1	2	1	2	1	2	..	3	4	7	9	6	4	2	3		43
3. Gastritis	9	8	..	7	10	..	3	4	10	3	....	..	..	..	..	..	3	1	5	3	2	..	..	3	2	1	1	3	1	1	1	2	..	..	2		17
4. Hepatitis	13	5	..	9	7	2	2	3	13	....	2	..	..	..	..	..	3	3	4	2	4	..	..	..	1	3	3	2	..	1	2	1	2	2	1		18
5. Peritonitis	29	35	..	33	26	5	21	15	28	3	2	3	6	6	7	3	15	9	6	2	1	..	1	6	8	6	5	9	4	3	6	5	..	4	8		64
6. Diseases of Pancreas	....	....	..	....	....	..	....	....	....	....	....	..	..	..	..	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		..
7. Diseases of Spleen	2	....	..	1	1	..	1	...	1	1	....	..	..	..	..	..	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..		2
8. Other Intestinal Diseases	20	12	.	16	15	1	10	5	17	3	1	2	..	3	2	2	4	4	6	5	..	..	..	3	4	4	3	1	1	2	8	1	1	3	1		32
Total....	98	78	..	101	66	9	71	30	75	34	11	6	8	9	10	5	26	19	23	13	8	2	2	15	16	16	12	18	10	14	26	16	7	11	15		176
DISEASES OF URINARY ORGANS.																																					
1. Nephria	39	40	..	31	47	1	9	26	44	3	1	4	..	..	2	5	9	11	8	16	11	6	3	11	10	4	3	5	7	6	5	6	8	7	7		79
2. Cystitis	4	1	..	....	5	..	....	....	5	....	....	..	..	..	..	..	....	..	1	..	1	3	..	..	1	..	..	1	..	..	1	..	1	1	..		5
3. Calculus	1	....	..	....	1	..	....	....	1	....	....	..	..	..	1	..	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..		1
4. Other Urinary Diseases	....	....	..	....	....	..	....	....	....	....	....	..	..	..	..	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		....
Total....	44	41	..	31	53	1	9	26	50	3	1	4	..	..	3	5	9	11	9	16	12	9	3	11	11	5	3	6	7	6	6	6	9	8	7		85

DEATHS BY CITIES IN 1894.—*Continued.*

TORONTO.—POPULATION, 192,118.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30 40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	1	....	..	1	...	..	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
2. Ostitis	...	....	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....
3. Other Locomotor Diseases	...	....	..	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....
Total	1	....	..	1	...	..	...	..	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Total Local Diseases	545	477	1	569	403	51	426	137	460	227	107	36	22	27	29	29	77	76	108	129	101	36	19	94	87	118	106	102	76	65	86	72	63	71	83	1023
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	207	195	16	418	...	..	418	...	...	418	...	...	...	...	...	...	...	...	...	...	...	...	...	49	27	39	26	34	29	42	35	31	35	36	35	418
2. Diseases of Parturition	....	8	..	4	3	1	...	8	...	...	...	...	...	...	1	1	5	1	...	...	...	...	...	..	1	3	1	1	2	..	...	...	...	...	...	8
3. Diseases of Old Age	66	66	..	11	116	5	2	37	93	...	...	...	...	...	...	...	...	...	...	...	59	73	..	13	11	9	9	7	10	4	10	11	11	15	22	132
Total Developmental Dis's.	273	269	16	433	119	6	420	45	93	418	...	...	...	...	1	1	5	1	...	...	59	73	..	62	39	51	36	42	41	46	45	42	46	51	57	558
VIOLENT DEATHS.																																			
1. Railroad Accidents	6	....	..	1	3	2	...	...	6	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	1	..	3	1	1	...	...	6
2. Wounds and other Accidents	31	10	..	23	15	3	12	5	24	1	3	5	2	2	2	..	7	7	1	5	2	2	1	2	2	2	3	5	2	4	6	3	4	4	4	41
3. Murder and Homicide	....	....	..	...	...	..	...	...	...	...	...	...	...	...	1	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	2
4. Suicide	1	1	..	1	1	..	...	1	1	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	7	3	2	3	..	1	...	20
5. Drowning	18	2	..	9	9	2	9	..	11	...	...	5	..	3	3	..	3	1	1	...	2	..	2	3	..	...	1	...	..	2	..	1	...	..	...	3
6. Lightning	3	....	..	2	1	..	2	...	1	...	...	...	2	1	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2
7. Street Railway Accidents	2	....	..	....	2	..	1	...	1	...	...	1	...	...	...	...	...	1	..	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	.....
8. Bicycling	....	....	..	....	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.....
Total Violent Deaths	61	13	.	36	31	7	24	6	44	1	3	11	4	6	6	1	10	11	5	7	4	2	3	5	2	2	5	6	9	12	10	9	5	5	4	74
Cause not specified	4	10	..	7	1	6	3	3	8	...	1	2	...	...	...	...	3	3	3	...	...	...	2	..	1	2	2	...	1	..	1	..	2	2	3	14
Total from all causes	1390	1270	18	1864	814	100	1505	333	940	933	268	118	55	79	105	106	215	165	195	192	199	114	34	247	200	257	231	239	205	249	262	223	220	214	231	2778

DEATHS BY TOWNS IN 1894.—*Continued.*

BERLIN.—POPULATION, 7,656.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	2	..	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	3	4	....	7	....	....	7	....	....	6	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	3	..	..	..	7
4. Dysentaria Acuta	...	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Erysipelas	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Febris Typhoides	4	1	..	3	2	....	....	1	4	..	..	..	..	..	..	..	3	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	4	5
8. Scarlatina	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
9. Puerperal Fever	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
10. Influenza	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	10	10	....	15	5	....	11	3	6	8	2	1	..	..	..	..	4	1	1	..	3	..	..	1	3	..	1	..	..	1	3	5	1	..	5	20
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Anæmia	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Anasarca	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	2	....	....	....	2	....	....	....	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
6. Rheumatism and Gout	1	....	....	1	....	..	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	3	4	....	4	3	....	....	3	4	..	..	..	..	..	1	1	3	..	2	..	..	..	..	1	..	..	..	..	..	1	..	3	1	..	1	7
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY TOWNS IN 1894.—*Continued.*

BERLIN.—POPULATION, 7,656.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases	8	6	....	7	7	....	2	5	7	1	..	..	1	..	1	1	3	..	3	2	2	..	..	1	1	..	2	1	..	1	1	4	1	1	1	14
NERVOUS DISEASES.																																			
1. Apoplexy	....	2	....	....	2	....	....	2	....	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2
2. Convulsions	2	....	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	2
3. Encephalitis	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	3	....	....	1	2	....	....	....	3	..	..	..	..	..	..	..	..	1	1	..	1	..	..	1	..	..	1	1	..	..	..	..	..	..	..	3
Total	5	3	....	4	4	....	3	2	3	2	1	..	..	..	..	..	..	1	2	..	2	..	..	2	..	1	..	2	1	1	..	..	..	..	1	8
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	3	1	....	1	3	....	....	1	3	..	..	..	..	..	..	..	..	1	..	2	1	..	..	..	..	1	..	..	1	..	1	..	..	..	1	4
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
Total	4	2	....	1	5	....	....	2	4	..	..	..	..	..	..	..	..	1	1	2	2	..	..	1	..	2	..	..	1	..	1	..	..	..	1	6
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	1	....	....	1	....	....	..	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	1	....	....	1	..	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

COBOURG.—Population, 4,968.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	1	..	3	..	..	3	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	3
2. Cholera Morbus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Dysentaria Acuta	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	5	3	..	8	..	..	8	..	..	1	3	1	2	1	..	..	..	..	..	..	..	..	..	1	2	1	1	..	..	..	1	..	1	1	8
6. Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	..	1	..	1	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
8. Scarlatina	1	..	..	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
9. Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
11. Morbilli	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Pyæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total Zymotic Diseases	10	6	..	14	2	..	13	1	2	4	4	1	3	1	..	..	..	1	..	..	2	..	..	2	2	2	2	..	..	..	2	4	..	1	1	16
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Anæmia	..	1	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
3. Anasarca	2	1	..	2	1	..	..	1	2	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	3
4. Asthma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Carcinoma	1	2	..	3	..	..	..	2	1	..	..	..	..	..	1	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	3
6. Rheumatism and Gout	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Hydrocephalus	..	1	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
8. Phthisis	3	..	..	2	1	..	..	..	3	..	..	..	..	..	..	1	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	1	3
9. Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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DEATHS BY TOWNS IN 1894.—*Continued.*

COBOURG.—POPULATION 4,968.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION																																			
1. Arthritis	....	....	....	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	8	12	....	8	12	....	5	7	8	..	2	..	..	1	1	1	2	2	2	6	3	..	..	1	1	3	..	2	3	2	2	..	2	..	4	20
DEVELOPMENTAL DISEASES																																			
1. Diseases of Pre-natal Period	3	3	....	6	....	....	6	....	....	6	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	..	..	1	..	..	..	..	..	..	6
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	4	7	....	....	11	....	1	6	4	..	..	..	..	..	..	..	..	..	..	..	3	8	..	1	1	1	..	..	1	1	2	1	..	1	2	11
Total Developmental Dis's.	7	10	....	6	11	....	7	6	4	6	..	..	..	..	..	..	..	..	..	..	3	8	..	3	1	4	..	..	2	1	2	1	..	1	2	17
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Murder and Homicide	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.. ..
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	31	33	....	37	27	....	26	18	20	11	6	1	3	2	3	2	2	4	6	7	9	8	..	8	4	11	2	2	5	3	6	7	3	4	9	64

DEATHS BY TOWNS IN 1894.—*Continued.*

CORNWALL.—Population, 7,016.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum																																			
2. Cholera Morbus																																			
3. Diarrhœa Acuta	3	1	..	4			4			2	2																		3	1					4
4. Dysentaria Acuta																																			
5. Diphtheria and Croup (Cynanche Trachealis)	4	1	..	5			5				4	1												1								3		1	5
6. Erysipelas																																			
7. Febris Typhoides	1	1		2				1	1						1			1												1	1			2
8. Scarlatina	11	5		16			15		1		6	9					1							8	1	3			1	3					16
9. Puerperal Fever																																			
10. Influenza																																			
11. Morbilli																																			
12. Whooping Cough																																			
13. Pyæmia																																			
14. Variola																																			
15. Syphilis																																			
16. Other Zymotic Diseases																																			
Total Zymotic Diseases	19	8		27			24	1	2	2	12	10			1		1	1						9	1	3			1	6	2	1	3		1	27
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	1		2			1		1	1							1												1				1		2
2. Anæmia	2			1	1		1		1	1									1									1		1					2
3. Anasarca																																			
4. Asthma																																			
5. Carcinoma	3			2	1		1		2				1					1	1								1		1		1			3
6. Rheumatism and Gout		1		1				1										1									1							1
7. Hydrocephalus																																			
8. Phthisis	8	3		10	1		1	1	9			1		3	1	1	3	2						1		2		3		1			3	1	11
9. Tabes Mesenterica																																			
10. Other Tubercular Diseases																																			
11. Diabetes																																			

exc.

DEATHS BY TOWNS IN 1894.—*Continued.*

CORNWALL.—POPULATION, 7,016.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	.	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total Constitut'l Diseases	15	5	....	16	4	....	4	2	14	2	..	1	1	3	1	1	4	2	3	2	..	..	..	2	..	2	..	5	1	3	1	1	..	4	1	20
NERVOUS DISEASES.																																			
1. Apoplexy	....	1	...	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
2. Convulsions	2	....	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	2	2	....	4	....	....	4	....	....	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	1	..	..	..	4
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	2	6	....	6	2	....	....	5	3	..	..	..	..	1	..	..	2	..	2	1	1	1	..	1	..	3	2	..	..	..	..	..	1	..	1	8
Total	6	9	....	13	2	....	6	6	3	1	4	..	1	1	..	..	2	..	2	1	2	1	..	2	2	3	3	2	..	..	1	..	1	..	1	15
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	...	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
5. Valvular Diseases	....	2	....	2	....	....	....	1	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2
Total	1	4	....	4	1	....	....	3	2	..	..	..	..	1	..	1	2	..	1	..	..	..	..	..	..	..	2	1	..	..	1	..	..	1	5
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	2	....	2	1	....	2	1	....	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	3
2. Pneumonia	3	3	.. .	6	....	....	4	1	1	..	4	..	..	..	..	..	..	1	1	..	..	..	..	2	..	2	..	..	..	..	..	..	..	..	2	6
3. Pleurisy	....	....	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	4	5	....	8	1	....	6	2	1	1	4	..	..	..	1	..	..	1	1	1	..	..	..	2	..	2	..	1	..	..	..	..	1	1	2	9

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DEATHS BY TOWNS IN 1894.—*Continued.*

COLLINGWOOD.—Population, 5,091.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
4. Dysentaria Acuta	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1
5. Diphtheria and Croup (Cynanche Trachealis)	1	....	....	1	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	1	2	....	3	....	....	2	1	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	....	3
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	....	1	....	1	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	1	1	....	2	....	....	2	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	2
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	3	7	....	9	1	....	7	3	....	3	2	..	2	..	2	..	..	..	1	..	..	..	..	..	..	1	..	1	1	..	1	3	1	1	1	10
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
2. Anæmia	1	2	....	3	....	....	3	....	....	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	3
3. Anasarca	1	....	....	1	....	....	....	....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
4. Asthma	....	1	....	....	1	....	..	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
5. Carcinoma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Hydrocephalus	....	2	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
8. Phthisis	4	7	....	10	1	....	5	....	6	..	..	..	1	2	3	3	1	..	..	1	..	..	..	1	1	2	..	1	1	..	1	1	..	..	3	11
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Excess.

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DEATHS BY TOWNS IN 1894.—*Continued.*

COLLINGWOOD.—POPULATION, 5,091.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	3	11	....	11	3	....	9	2	3	3	2	2	..	1	..	1	..	..	2	1	2	..	..	1	..	..	2	1	3	2	..	2	1	2	..	14
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	2	3	....	....	5	....	....	3	2	..	..	..	..	..	..	..	..	..	..	..	1	4	..	1	..	3	1	..	..	..	..	..	..	..	..	5
Total Developmental Dis's.	3	3	....	1	5	....	1	3	2	1	..	..	..	..	..	..	..	..	..	..	1	4	..	1	..	3	1	..	1	..	..	..	..	..	..	6
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	....	1	....	....	1	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Total Violent Deaths	....	1	....	....	1	....	1	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	15	36	....	38	13	....	29	10	12	10	5	4	3	4	5	4	1	.	5	3	3	4	.	4	1	8	3	3	8	4	4	6	3	3	4	51

DEATHS BY TOWNS IN 1894.—*Continued.*

CARLETON PLACE.—Population, 4,568.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4			4			4			4																				4					4
2. Cholera Morbus																																			
3. Diarrhœa Acuta																																			
4. Dysentaria Acuta																																			
5. Diphtheria and Croup (Cynanche Trachealis)	1			1			1				1																						1		1
6. Erysipelas		1		1				1											1														1		1
7. Febris Typhoides	1				1				1								1												1						1
8. Scarlatina																																			
9. Puerperal Fever																																			
10. Influenza																																			
11. Morbilli																																			
12. Whooping Cough																																			
13. Pyæmia																																			
14. Variola																																			
15. Syphilis																																			
16. Other Zymotic Diseases																																			
Total Zymotic Diseases	6	1		6	1		5	1	1	4	1						1		1										1	4			2		7
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor																																			
2. Anæmia		1			1			1											1														1		1
3. Anasarca		1			1			1													1			1											1
4. Asthma																																			
5. Carcinoma	1	1		2					2										1		1						1			1					2
6. Rheumatism and Gout																																			
7. Hydrocephalus																																			
8. Phthisis		2		2			1	1					1		1									1		1									2
9. Tabes Mesenterica																																			
10. Other Tubercular Diseases																																			
11. Diabetes																																			

DEATHS BY TOWNS IN 1894.—*Continued.*

CARLETON PLACE.—Population, 4,568.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	1	5	....	4	2	....	1	3	2	..	..	..	..	1	..	1	..	..	1	1	..	2	..	2	..	1	1	..	..	..	1	..	..	1	..	6
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Convulsions	....	1	....	1	....	..	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Paralysis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total	....	2	....	1	1	....	1	1	....	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	1	1	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	1	1	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2

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DEATHS BY TOWNS IN 1894.—*Continued.*

DESERONTO.—Population, 3,438.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	2	....	4	....	....	4	..	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	..	..	4
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	2	1	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	1	...	1	..	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	..	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Scarlatina	....	....	....	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	1	2	....	3	....	....	1	2	....	1	..	..	..	..	..	..	..	1	..	..	..	1	..	3	..	..	..	..	..	..	..	..	..	..	..	3
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	5	6	....	11	....	....	9	2	....	8	1	..	..	..	..	..	..	1	..	..	..	1	..	3	..	..	..	..	..	2	2	1	2	..	1	11
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	1	....	...	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	..	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	3	3	...	6	....	....	5	....	1	..	..	..	2	1	1	2	..	..	..	..	..	..	..	2	..	1	..	..	2	..	..	..	..	1	6
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

DESERONTO.—POPULATION, 3,438.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	...	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total Local Diseases	5	5	....	9	1	...	7	1	2	2	3	2	..	1	..	..	..	..	1	1	..	..	..	1	..	1	1	1	1	1	..	1	1	2	.	10
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	3	2	....	5	....	....	5	....	....	5	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	..	1	5
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	....	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Developmental Dis's.	3	2	..	5	....	....	5	....	....	5	..	.	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	1	5
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
2. Wounds and other Accidents	1	....	....	1	....	..	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowned	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Street Railway Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	1	...	....	1	....	....	1	....	...	..	..	1	.	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	18	16	....	32	2	....	27	3	4	15	4	3	2	2	1	2	..	1	2	1	..	1	..	7	1	3	2	2	3	3	2	2	4	2	3	34

DEATHS BY TOWNS IN 1894.—*Continued.*

FORT WILLIAM.—POPULATION, 1,040

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	....	1	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	....	2	....	1	1	....	....	1	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	2
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	...	2	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	....	6	....	5	1	....	3	1	2	2	1	..	..	..	1	..	1	..	..	..	..	..	1	1	..	..	..	2	1	..	..	1	..	1	6
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Anæmia	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
3. Anasarca	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	3	2	....	2	1	2	2	....	3	1	..	..	..	1	1	..	..	1	..	..	..	..	1	..	..	1	..	..	1	..	1	..	1	..	5
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY TOWNS IN 1894.—*Continued.*

FORT WILLIAM.—POPULATION, 1,040.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	4	2	....	3	1	2	3	....	3	1	..	1	..	1	1	..	..	1	..	..	..	..	1	..	..	1	..	..	1	..	2	..	1	..	1	6
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Convulsions	4	1	....	5	....	....	5	....	....	3	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	1	..	1	5
3. Encephalitis	1	1	....	2	....	....	2	....	....	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	5	2	....	7	....	....	7	....	....	4	2	..	1	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	1	..	1	..	1	7
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Total	1	1	....	1	....	1	....	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	2
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	2	....	4	....	....	4	....	....	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	..	..	..	..	..	..	4
2. Pneumonia	3	2	....	3	1	1	1	1	3	..	1	..	..	..	..	..	2	1	..	..	..	..	1	..	..	2	1	..	..	..	..	..	2	..	..	5
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	5	4	....	7	1	1	5	1	3	3	2	..	..	..	..	..	2	1	..	..	..	..	1	..	1	3	1	1	1	..	..	..	2	..	..	9

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DEATHS BY TOWNS IN 1894.—*Continued.*

GALT.—POPULATION, 7,769.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	1	....	5	....	....	5	....	....	4	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	2	2	....	....	....	5
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	3	....	....	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	1	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	8	2	....	9	1	....	8	1	1	7	1	....	....	....	....	....	1	....	1	....	....	....	....	....	1	....	....	....	....	2	4	1	2	....	10
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
2. Anæmia	1	3	....	4	....	....	3	1	....	3	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	1	....	1	1	....	....	....	....	....	....	4
3. Anasarca	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Asthma	2	1	....	1	2	....	....	1	2	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	2	....	....	....	....	....	....	1	3
5. Carcinoma	2	3	....	2	3	....	1	1	3	....	....	....	....	....	....	....	....	....	1	3	1	....	....	....	....	....	2	1	....	....	1	1	....	....	5
6. Rheumatism and Gout	2	....	....	2	....	....	2	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	2
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Phthisis	3	3	....	5	1	....	....	3	3	....	....	....	....	....	1	....	1	2	2	....	....	....	....	....	2	....	....	1	....	....	2	1	....	....	6
9. Tabes Mesenterica	1	....	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	1	1	....	....	2	....	....	1	1	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	2

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DEATHS BY TOWNS IN 1894.—*Continued.*

GALT.—POPULATION, 7,769.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	. . .
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	24	22	....	26	20	....	11	14	21	3	5	1	1	2	2	2	4	4	5	8	7	2	..	5	2	1	12	3	6	4	1	..	4	4	4	46
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	8	5	....	13	....	....	13	....	....	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	2	..	..	1	4	2	13
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	5	5	....	1	9	....	....	5	5	..	..	..	..	..	..	..	..	..	..	..	3	7	..	..	1	..	1	..	1	2	2	1	..	..	2	10
Total Developmental Dis's.	13	10	...	14	9	....	13	5	5	18	..	..	..	..	..	..	..	..	..	..	3	7	..	..	2	1	1	1	2	4	2	1	1	4	4	23
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	5	2	....	4	3	....	3	1	3	..	1	1	..	..	..	1	..	..	2	..	1	1	..	1	..	1	2	1	1	..	..	1	..	..	..	7
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	2	....	....	1	1	....	1	....	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	2
Total Violent Deaths	7	2	....	5	4	....	4	1	4	..	1	1	1	1	..	1	..	..	2	..	1	1	..	1	..	1	2	1	2	..	..	2	..	..	..	9
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	65	47	...	70	42	....	43	28	41	27	7	2	3	4	3	3	5	8	10	14	16	10	.	6	6	6	17	8	13	9	7	13	8	10	9	112

DEATHS BY TOWNS IN 1894.—*Continued.*

GANANOQUE.—Population, 3,779.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	1	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	3
2. Cholera Morbus	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	1	....	1	....	....	1	....	...	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	2	2	....	4	....	....	4	....	....	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	..	..	4
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	2	1	....	3	....	....	1	1	1	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	3
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY TOWNS IN 1894.—*Continued.*

GANANOQUE.—POPULATION, 3,779.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-35.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	2	2	....	4	....	....	2	1	1	2	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	1	..	..	..	1	1	..	..	..	4
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Convulsions	....	2	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Total	1	2	....	2	1	....	2	....	1	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	3
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	2	....	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	2	....	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2

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DEATHS BY TOWNS IN 1894.—*Continued.*

GEORGETOWN.—POPULATION, 1,554.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	1	2	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	3
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Rheumatism and Gout	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

GEORGETOWN.—POPULATION, 1,554.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Dec ember.	
DISEASES OF LOCOMOTION.																																		
1. Arthritis	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	5	3	....	6	2	...	5	....	3	2	1	2	..	..	..	..	..	1	1	1	..	..	..	2	..	..	..	..	..	..	1	..	..	5	8
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Diseases of Parturition	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	2
Total Developmental Dis's.	..	2	....	1	1	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	2
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Lightning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Street Railway Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Bicycling	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	6	8	....	11	3	....	9	2	3	4	2	2	..	..	..	..	1	1	1	1	1	1	..	3	1	..	1	..	1	..	2	1	..	..	5	14

DEATHS BY TOWNS IN 1894.—*Continued.*

GODERICH.—Population, 3,957.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
CONSTITUTIONAL DISEASES.																																			
1. Abcess or Tumor	1	1	..	2	....	....	1	....	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Asthma	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Phthisis	1	3	..	4	....	....	2	....	2	..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	..	1	4
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY TOWNS IN 1894.—*Continued.*

GODERICH.—POPULATION, 3,957.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	2	5	..	7	..	..	4	....	3	1	..	..	..	2	3	..	..	..	1	..	..	..	..	..	1	2	..	1	..	1	..	..	..	1	1	7
NERVOUS DISEASES.																																			
1. Apoplexy	...	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Convulsions	...	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
3. Encephalitis	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	...	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2
Total....	2	3	....	2	3	....	2	1	2	1	1	..	..	..	..	..	..	..	..	1	2	..	..	3	1	..	..	..	..	..	1	..	..	..	..	5
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Total....	1	2	....	2	1	....	1	2	....	..	..	1	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

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DEATHS BY TOWNS IN 1894.—*Continued.*

INGERSOLL.—Population 4,316.

Sex—Nativity—Social condition -Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	....	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	..	1	..	..	4
2. Cholera Morbus	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
3. Diarrhœa Acuta	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	3	....	....	3	....	....	3	....	....	1	..	..	1	.	..	..	1	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
8. Scarlatina	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	9	2	....	9	2	....	9	....	2	6	1	..	1	..	..	..	1	..	..	2	..	..	..	1	1	..	1	1	..	3	..	2	2	..	11
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	2	....	....	1	....	1	....	....	2	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	2
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	1	3	....	1	3	....	....	3	1	..	..	..	..	..	..	..	..	1	2	1	..	..	..	1	..	..	..	1	..	..	..	1	1	..	4
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	1	....	....	....	1	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
8. Phthisis	2	9	....	10	1	....	4	5	2	..	..	..	..	2	3	1	2	2	1	..	..	..	..	1	1	1	1	1	..	..	..	1	2	2	1	11
9. Tabes Mesenterica	....	1	..	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

INGERSOLL.—POPULATION 4,316.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10 15.	15-20.	20-25.	25-30.	30-40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	...	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	13	11	....	7	17	....	6	9	9	2	2	..	..	1	1	..	2	..	3	7	5	1	..	2	4	4	2	3	1	1	2	1	2	..	2	24
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	1	3	....	4	....	....	4	..	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	..	..	..	..	..	4
2. Diseases of Parturition	....	1	...	....	1	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Diseases of Old Age	1	1	....	....	2	..	....	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	1	..	..	2
Total Developmental Dis's.	2	5	....	4	3	....	4	2	1	4	..	..	..	..	..	..	1	..	..	..	1	1	..	1	..	..	2	2	..	1	..	..	1	..	..	7
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	1	....	....	...	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Cause not specified	1	1	....	2	....	....	1	1	....	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	2
Total from all causes	32	32	....	35	28	1	25	21	18	12	5	..	1	3	4	1	8	4	6	12	6	2	..	8	6	5	6	9	2	5	2	5	9	4	3	64

DEATHS BY TOWNS IN 1894.—*Continued.*

LINDSAY.—Population, 6,270.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
3. Diarrhœa Acuta	....	1	..	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
4. Dysentaria Acuta	1	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
5. Diphtheria and Croup (Cynanche Trachealis)	6	9	....	15	....	....	15	....	....	....	6	8	1	....	....	....	....	....	....	....	....	....	....	3	....	1	4	....	2	....	1	1	2	....	1	15
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
10. Influenza	1	1	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	1	....	....	1	2
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Total Zymotic Diseases	8	11	....	16	3	....	16	....	3	1	6	8	1	....	....	....	....	....	....	3	....	....	....	3	....	1	4	....	2	1	1	2	2	....	3	19
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
2. Anæmia	3	....	....	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	2	3
3. Anasarca	1	1	....	....	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	1	1	....	....	....	....	....	....	....	....	2
4. Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
5. Carcinoma	....	1	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
8. Phthisis	2	6	....	7	....	1	2	2	4	....	....	....	....	2	1	....	1	3	1	....	....	....	....	....	1	....	....	1	1	....	....	....	3	1	1	8
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....

DEATHS BY TOWNS IN 1894.—*Continued.*

LINDSAY.—POPULATION, 6,270.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases	7	8	....	12	2	1	6	2	7	4	..	..	..	2	1	..	1	4	1	1	1	..	..	..	2	1	1	2	1	1	..	..	3	1	3	15
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Convulsions	3	....	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	3
3. Encephalitis	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	..	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	2	4	....	3	3	..	2	1	3	1	..	..	1	..	..	..	..	..	..	3	1	..	..	1	1	..	1	..	..	1	2	..	..	..	..	6
Total	6	4	....	7	3	....	6	1	3	3	2	..	1	..	..	..	..	..	..	3	1	..	..	2	1	1	2	..	..	1	2	1	..	..	..	10
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	1	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	2	1	....	2	1	....	....	....	3	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	1	..	1	..	..	..	..	..	1	..	..	3
Total	3	2	....	3	2	....	....	....	5	..	..	..	..	..	1	..	..	..	1	1	2	..	..	..	1	..	2	..	..	..	..	..	1	..	1	5
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
2. Pneumonia	2	2	....	4	....	....	3	....	1	1	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	1	..	..	4
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	2	3	....	5	....	....	4	....	1	1	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	1	1	..	1	..	..	5

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

LONDON WEST.—Population, 1,972.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	....	....	1	....	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	4	1	....	3	2	....	3	1	1	1	1	1	..	..	..	..	..	1	..	..	1	..	..	1	1	..	1	..	1	..	1	..	..	..	5
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Rheumatism and Gout	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	..	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	2	1	....	2	1	....	....	1	2	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	1	1	1	..	..	..	..	..	3
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

LONDON WEST.—POPULATION, 1,972.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	4	3	....	4	3	....	2	2	3	2	..	..	..	..	..	1	..	..	4	..	..	..	..	1	..	..	2	..	2	..	..	1	..	..	1	7
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diseases of Old Age	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Developmental Dis's.	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Suicide	....	..	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Drowned	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Violent Deaths	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Cause not specified	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total from all causes	11	5	....	9	7	....	5	4	7	3	1	1	..	..	1	1	1	1	5	1	1	..	..	2	1	..	4	1	4	..	1	1	..	..	2	16

DEATHS BY TOWNS IN 1894.—*Continued.*

NIAGARA FALLS.—Population, 3,448.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	2	....	3	....	....	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	1	....	....	....	3
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	1	....	3	....	....	3	....	....	....	1	1	....	....	....	1	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....	1	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13. Pyæmia	1	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	4	3	....	6	....	1	6	....	1	3	1	1	....	....	....	1	....	....	....	1	....	....	....	1	1	....	....	1	....	1	1	1	....	1	7
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2. Anæmia	....	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	1
3. Anasarca	....	1	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
4. Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Carcinoma	1	1	....	1	1	....	....	1	1	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	1	2
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Phthisis	1	1	....	....	2	....	....	1	1	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	2
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

DEATHS BY TOWNS IN 1894.—*Continued.*

NIAGARA FALLS.—POPULATION, 3,448.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	2	4	....	3	3	....	2	2	2	1	..	..	..	1	..	..	3	..	..	..	1	..	..	..	..	1	..	1	1	..	..	..	..	1	2	6
NERVOUS DISEASES.																																			
1. Apoplexy	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	1	....	....	1	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	1	1	..	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2
Total....	1	2	....	....	3	....	1	1	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	1	1	..	..	..	..	3
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	1	....	2	....	....	....	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2
Total....	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..	1	1	..	..	1	..	..	..	..	..	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	2	....	..	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
2. Pneumonia	1	1	....	2	....	....	1	....	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	3	1	....	4	....	....	3	....	1	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	..	4

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

NAPANEE.—Population, 3,609.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	3	....	5	....	....	5	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2	2	....	....	5
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	1	....	1	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Diphtheria and Croup (Cynanche Trachealis)	4	1	..	5	....	....	5	....	....	..	3	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	1	1	..	..	1	..	..	..	5
6. Erysipelas	....	1	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
7. Febris Typhoides	1	....	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	..	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	2	2	....	2	2	....	....	....	4	..	..	..	..	..	..	..	..	..	2	..	..	2	..	2	..	..	..	..	..	..	..	..	..	2	..	4
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	9	8	....	15	2	...	12	...	5	6	3	1	1	1	..	1	..	.	2	..	..	2	..	2	2	..	1	1	..	..	2	3	3	..	3	17
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	1	....	....	1	....	....	....	...	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	2	....	....	2	....	....	....	....	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	..	..	..	..	1	..	2
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
8. Phthisis	8	4	..	11	1	....	4	....	8	3	..	..	..	1	..	..	4	1	2	1	..	..	..	1	1	..	3	..	..	..	4	1	1	1	..	12
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

NAPANEE.—POPULATION, 3,609.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	..	....	....	....	....	..	...	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	13	13	....	15	10	1	4	2	20	3	1	..	..	..	..	1	1	5	3	5	6	1	..	5	3	1	3	2	1	3	..	..	4	1	3	26
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	1	2	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	.	1	1	..	..	3
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	1	3	....	3	1	....	....	2	2	..	..	..	..	..	..	..	..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	1	1	1	..	4
Total Developmental Dis's.	2	5	....	6	1	....	3	2	2	3	..	..	..	..	..	..	..	..	..	..	1	3	..	1	1	..	..	..	..	..	..	2	2	1	..	7
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	1	1	....	....	1	1	....	....	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2
3. Murder and Homicide	....	....	....	..	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Lightning	....	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	1	1	....	....	1	1	....	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1	2
Cause not specified	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total from all causes	37	32	..	52	15	2	24	4	41	15	4	1	1	2	..	1	6	6	7	8	8	7	..	9	8	2	9	3	1	3	7	6	10	4	7	69

DEATHS BY TOWNS IN 1894.—*Continued.*

NEWMARKET.—Population, 2,206.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2. Anæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Anasarca	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	1	2	....	....	....	....	3
5. Carcinoma	....	3	....	3	....	....	2	1	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	1
6. Rheumatism and Gout	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Phthisis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	....	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1

DEATHS BY TOWNS IN 1894.—*Continued.*

NEWMARKET.—Population, 2,206.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70 80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	1	5	....	4	2	....	3	3	....	1	..	..	..	1	..	..	..	1	..	1	2	..	..	..	1	..	..	..	2	3	..	..	..	..	..	6
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	1	....	1	....	....	1	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
2. Pneumonia	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	2	....	2	..	....	1	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2

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DEATHS BY TOWNS IN 1894.—*Continued.*

ORANGEVILLE.—Population, 3,050.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10 15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Dysentaria Acuta	..	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	1	2	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Scarlatina	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	1	....	....	....	1	..	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	2	2	....	3	1	....	3	....	1	1	2	..	..	..	..	..	..	..	..	..	1	..	..	3	..	..	..	..	1	..	..	..	..	..	4
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
6. Rheumatism and Gout	....	....	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
8. Phthisis	2	5	..	6	1	....	2	2	3	1	..	..	..	1	..	..	2	2	1	..	..	..	..	..	..	..	1	1	1	..	1	..	..	2	1	7
9. Tabes Mesenterica	..	1	..	..	1	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

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DEATHS BY TOWNS IN 1894.—*Continued.*

ORANGEVILLE.—Population 3,050.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	4	8	....	5	5	2	2	6	4	1	1	..	..	..	..	..	1	1	4	1	2	..	1	1	1	..	1	3	1	..	..	..	2	1	2	12
DEVELOPMENTAL DISEASES																																			
1. Diseases of Pre-natal Period	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Diseases of Parturition	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
3. Diseases of Old Age	1	2	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	1	..	..	..	..	1	..	..	..	..	..	3
Total Developmental Dis's.	1	3	....	1	3	....	....	3	1	..	..	..	..	..	..	..	1	..	..	..	2	1	..	1	1	..	..	..	..	2	..	..	..	..	..	4
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
3. Murder and Homicide	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	11	20	....	17	12	2	8	13	10	4	3	..	..	1	..	1	3	4	7	1	5	1	1	5	2	1	2	4	2	3	1	1	2	4	4	31

DEATHS BY TOWNS IN 1894.—*Continued.*

OWEN SOUND.—Population, 7,729.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	....	2	..	...	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
2. Cholera Morbus	...	....	....	....	..	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	...	1	....	1	.	...	1	....	...	.	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	3	....	....	3	....	....	3	....	....	..	..	2	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	..	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	2	2	....	4	....	....	3	....	1	..	1	..	..	2	..	1	..	..	..	..	..	..	..	..	1	2	1	..	..	..	..	..	..	..	4
8. Scarlatina	1	1	....	2	....	....	2	....	....	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	1	1	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	1	..	2
11. Morbilli	2	3	....	5	....	..	5	....	....	1	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	1	..	..	..	..	..	..	5
12. Whooping Cough	2	1	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	..	..	3
13. Pyæmia	....	....	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Total Zymotic Diseases	13	10	....	20	3	...	19	1	3	5	7	4	1	2	..	1	..	..	..	1	2	..	..	2	1	5	3	1	..	1	4	..	1	2	3	23
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	....	1	....	....	1	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
2. Anæmia	1	1	....	2	..	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
3. Anasarca	...	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	....	..	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Rheumatism and Gout	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	7	6	....	11	2	....	6	3	4	3	..	..	1	1	2	1	4	..	..	1	..	..	..	2	..	..	..	..	..	2	3	..	1	2	3	13
9. Tabes Mesenterica	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY TOWNS IN 1894.—*Continued.*

OWEN SOUND.—Population, 7,729.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	10	9	....	14	5	....	9	5	5	4	1	1	1	1	3	1	4	..	1	..	2	..	..	2	..	..	1	1	..	3	3	3	1	2	3	19
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	1	4	....	2	3	....	....	4	1	..	..	..	..	..	..	..	1	..	1	1	2	..	..	1	..	1	..	..	2	..	..	..	1	..	..	5
Total	1	4	....	2	3	....	....	4	1	..	..	..	..	..	..	..	1	..	1	1	2	..	..	1	..	1	..	..	2	..	..	..	1	..	..	5
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	1	..	2	..	..	1	..	..	..	..	..	4
5. Valvular Diseases	1	3	....	2	2	....	1	1	2	..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	1	3	....	2	2	....	1	1	2	..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	1	..	2	..	..	1	..	..	..	..	4
DISEASES OF RESPIRATION.																																			
1. Bronchitis	3	3	....	5	1	....	5	....	1	5	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1	2	1	..	..	..	..	1	..	..	6
2. Pneumonia	1	4	....	2	3	....	2	2	1	..	..	1	..	..	1	1	..	1	1	..	..	..	..	..	1	..	1	1	1	..	1	..	..	..	..	5
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	4	7	....	7	4	....	7	2	2	5	..	1	..	..	..	1	1	..	1	2	..	..	..	1	1	1	3	2	1	..	1	..	..	1	..	11

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

PARIS.—POPULATION, 3,124.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	2	1	....	3	....	....	2	....	1	1	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	3
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	....	3	....	1	2	....	1	2	....	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2	..	..	1	..	3
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	1	3	...	4	....	....	1	1	2	..	..	..	..	..	..	2	1	1	..	..	..	..	..	1	..	..	..	1	..	..	1	1	..	..	4
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	1	1	....	2	....	....	1	....	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	2

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DEATHS BY TOWNS IN 1894.—*Continued.*

PARIS.—Population, 3,124.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	12	7	....	9	9	1	6	5	8	..	4	2	..	..	..	..	1	..	2	4	4	1	1	2	3	..	1	2	1	..	4	2	1	1	2	19
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	1	2	....	3	...	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	3
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diseases of Old Age	2	1	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	3	..	1	..	..	1	..	..	1	..	..	..	..	..	3
Total Developmental Dis's.	3	3	....	3	3	....	3	1	2	3	..	..	..	..	..	..	..	..	..	..	..	3	..	1	..	..	2	..	..	2	..	..	..	..	1	6
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Drowning	1	....	....	....	1	....	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2
Total Violent Deaths	2	....	....	....	2	....	1	....	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	2
Cause not specified	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Total from all causes	21	18	...	22	16	1	15	9	15	4	6	2	1	1	..	2	2	1	5	5	4	5	1	5	3	1	3	3	2	5	6	3	4	1	3	39

DEATHS BY TOWNS IN 1894.—*Continued.*

PORT ARTHUR.—Population, 2,780.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	1	....	3	....	....	3	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	3	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	2	....	....	1	1	....	....	....	2	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	2
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	1	2	....	1	1	1	1	1	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	6	5	....	8	2	1	7	1	3	5	1	..	..	..	2	..	2	..	..	..	..	..	1	3	1	1	..	..	..	..	2	1	..	3	11
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
6. Rheumatism and Gout	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	3	....	....	2	....	1	1	....	2	1	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	1	..	..	..	..	1	..	..	..	3
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY TOWNS IN 1894.—*Continued.*

PORT ARTHUR.—Population, 2,780.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	5	1	....	4	....	2	2	....	4	1	..	..	..	1	..	..	..	3	..	..	..	..	1	1	1	..	1	..	..	..	2	1	..	..	..	6
NERVOUS DISEASES.																																			
1. Apoplexy	1	....	....	....	1	....	....	...	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	2	2	....	3	1	....	4	....	....	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	4
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Paralysis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	3	2	....	3	2	....	4	....	1	1	1	1	1	..	..	..	..	1	..	..	..	..	..	..	2	1	..	..	..	..	1	..	..	..	1	5
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	2	1	....	....	3	....	....	1	2	..	..	..	..	..	..	1	..	1	..	1	..	..	..	1	..	..	..	..	1	1	..	..	..	..	3
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	2	1	....	....	3	....	....	1	2	..	..	..	..	..	..	1	..	1	..	1	..	..	..	1	..	..	..	..	1	1	..	..	..	..	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
2. Pneumonia	2	4	....	4	1	1	3	....	3	3	..	..	..	..	..	..	..	1	1	..	..	..	1	2	1	1	..	2	..	..	..	..	..	..	..	6
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	3	4	....	5	1	1	4	....	3	3	1	..	..	..	..	..	..	1	1	..	..	..	1	2	1	2	..	2	..	..	..	..	..	..	..	7

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DEATHS BY TOWNS IN 1894.—*Continued.*

PETERBORO'.—POPULATION, 10,216.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	4	3	....	7	....	....	7	....	...	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	2	..	..	..	7
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	2	1	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	5	6	....	11	....	....	10	....	1	..	6	2	2	..	1	..	..	..	..	..	..	..	..	3	1	..	..	..	1	1	1	..	2	2	..	11
6. Erysipelas	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
7. Febris Typhoides	3	5	...	5	3	...	4	..	4	..	..	..	..	4	1	1	1	..	..	1	..	..	..	..	1	..	..	..	..	1	3	2	..	..	1	8
8. Scarlatina	1	3	....	4	....	....	4	....	....	..	2	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	..	1	..	..	4
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	2	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	2
13. Pyæmia	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	1	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	16	24	....	36	4	....	33	1	6	12	9	5	2	5	2	1	1	..	..	1	2	..	..	6	3	..	1	..	3	5	10	4	3	3	2	40
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	2	....	1	2	....	....	1	2	..	..	..	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	1	1	..	3
2. Anæmia	....	3	....	2	1	....	1	2	....	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	..	3
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	2	3	....	2	3	....	1	1	3	..	..	..	..	1	..	..	..	1	2	..	1	..	..	..	..	..	1	1	..	..	1	..	..	..	2	5
6. Rheumatism and Gout	1	....	....	...	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	1	9	....	7	3	....	6	2	2	3	..	..	..	5	..	1	..	1	..	..	..	..	..	1	..	1	2	..	1	..	1	3	1	..	..	10
9. Tabes Mesenterica	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

PETERBORO'.—POPULATION, 10,216.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	...	....	....	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	..	....	....	....	....	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	40	22	...	43	19	..	37	7	18	24	7	1	1	2	2	..	2	3	4	5	8	3	.	6	3	8	8	4	7	3	5	5	5	1	7	62
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	14	8	2	24	....	....	24	....	....	24	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	3	2	4	2	2	1	3	1	1	..	24
2. Diseases of Parturition	....	5	....	4	1	....	....	5	....	..	..	..	..	1	..	2	2	..	..	..	..	..	..	1	..	2	..	..	..	..	..	..	1	..	..	5
3. Diseases of Old Age	4	1	....	....	5	...	....	1	4	..	..	..	..	..	..	..	..	..	..	..	1	4	..	..	..	..	2	1	1	..	..	..	..	..	1	5
Total Developmental Dis's.	18	14	2	28	6	....	24	6	4	24	..	..	..	1	..	2	2	..	..	..	1	4	..	3	3	5	4	5	3	2	2	3	2	1	1	34
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
2. Wounds and other Accidents	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	1	....	....	...	...	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
5. Drowned	3	2	....	4	1	....	1	..	4	..	..	..	1	..	3	..	..	..	..	..	1	..	..	..	..	..	1	..	1	1	..	2	..	..	..	5
6. Street Railway Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths.	5	2	....	5	2	....	1	....	6	..	..	..	1	..	3	..	1	..	1	..	1	..	..	1	..	..	1	..	1	1	1	2	..	..	..	7
Cause not specified	2	....	....	2	..	...	....	..	2	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2
Total from all causes	87	79	2	127	41	....	104	20	44	65	16	6	4	9	13	4	4	8	8	14	8	..	17	9	15	19	11	11	20	18	13	6	12	168

DEATHS BY TOWNS IN 1894.—*Continued.*

PICTON.—Population, 3,388

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	4	....	6	....	....	6	....	....	5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	3	2	..	..	6
2. Cholera Morbus	....	....	....	..	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	...	....	...	..	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	....	4	....	1	3	..	2	2	....	1	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	2	1	..	..	..	..	..	..	1	4
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	....	2	...	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
13. Pyæmia	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
14. Variola	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	1	..	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	3	10	....	10	3	....	11	2	....	7	3	..	..	..	..	..	..	..	..	..	2	1	..	..	..	2	1	1	..	1	1	4	2	..	1	13
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	2	....	....	1	....	1	....	....	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	2
2. Anæmia	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
3. Anasarca	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	2	1	....	3	....	....	....	1	2	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	3
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	5	3	....	7	1	....	2	1	5	..	1	..	..	..	2	3	2	..	..	..	..	..	..	..	2	..	2	1	1	..	..	..	..	..	2	8
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

DEATHS BY TOWNS IN 1894.—*Continued.*

PICTON.—POPULATION, 3,388.

Sex—Nativity—Social condition—Age—Month

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not stated.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	9	6	....	12	2	1	2	4	9	..	1	..	..	..	2	3	2	1	2	2	2	..	..	1	4	..	3	1	2	..	..	1	1	..	2	15
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Convulsions	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
3. Encephalitis	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
4. Epilepsy	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	..	1	..	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1
7. Necrencephalus	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
8. Paralysis	3	....	....	3	....	....	....	....	3	..	..	..	..	..	1	..	..	..	1	1	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..	3
Total	6	1	....	7	....	....	3	....	4	1	1	1	..	..	1	..	..	..	1	1	..	1	..	1	..	..	1	..	1	..	1	..	..	2	1	7
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	1	....	1	1	....	...	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
Total	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	1	..	..	..	..	1	..	..	..	1	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	3	3	....	4	2	....	1	3	2	..	1	..	..	..	..	..	..	1	2	2	..	..	..	..	2	..	..	2	1	..	..	..	..	..	1	6
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	3	3	..	4	2	....	1	3	2	..	1	..	..	..	..	..	..	1	2	2	..	..	..	..	2	..	..	2	1	..	..	..	..	..	1	6

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

PRESCOTT.—Population, 3,006.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	...	2	...	...	2	...	...	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2
2. Cholera Morbus	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diarrhœa Acuta	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Dysentaria Acuta	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Diphtheria and Croup (Cynanche Trachealis)	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Erysipelas	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Febris Typhoides	...	1	...	1	...	...	1	...	...	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
8. Scarlatina	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
9. Puerperal Fever	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Influenza	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Morbilli	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
12. Whooping Cough	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
13. Pyæmia	...	1	...	1	...	...	...	1	...	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
14. Variola	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
15. Syphilis	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
16. Other Zymotic Diseases	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Total Zymotic Diseases	1	3	...	4	...	...	3	1	...	1	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	..	4
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Anæmia	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Anasarca	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Asthma	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	...	1	...	1	...	...	...	1	...	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
6. Rheumatism and Gout	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	1	...	...	1	...	...	1	...	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
8. Phthisis	2	1	...	2	1	...	...	1	2	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	3
9. Tabes Mesenterica	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	...	...	...	...	...	...	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

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DEATHS BY TOWNS IN 1894.—*Continued.*

PRESCOTT.—POPULATION, 3,006.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Other Locomotor Diseases	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	....	4	....	1	3	....	2	2	....	..	1	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	1	..	..	..	1	1	..	1	..	4
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diseases of Old Age	2	1	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	1	..	..	..	1	..	..	..	3
Total Developmental Dis's.	3	1	...	1	3	....	1	1	2	1	..	..	..	..	..	..	..	..	..	..	1	2	..	..	1	..	..	1	1	..	..	1	..	..	..	4
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	....	...	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	....	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Cause not specified	....	....	...	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	7	10	...	10	7	....	7	6	4	3	2	..	1	..	..	2	2	..	1	1	2	3	..	..	3	..	2	1	2	1	1	3	2	2	..	17

DEATHS BY TOWNS IN 1894.—*Continued.*

PEMBROKE.—Population, 4,537.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	...	....	..	....	....	....	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases	6	8	....	11	3	....	3	2	9	..	2	..	1	..	2	2	2	3	1	..	1	..	.	1	2	1	1	2	..	3	2	..	..	1	1	14
NERVOUS DISEASES.																																			
1. Apoplexy	....	1	....	....	1	....	....	....	1	..	.	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Convulsions	....	6	1	...	7	....	....	7	....	....	5	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	1	..	..	2	..	..	1	7
3. Encephalitis	....	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	1	3	....	4	....	....	2	1	1	..	1	1	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	1	..	1	..	..	4
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Total	9	5	....	14	....	....	10	1	3	6	3	1	..	1	1	..	..	..	2	..	..	..	..	1	1	..	3	2	1	1	..	3	1	..	1	14
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	1	....	1	....	....	1	...	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	1	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	2
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	2	1	....	3	....	....	1	....	2	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	3
Total	3	3	....	5	1	....	2	....	4	..	..	..	1	1	..	..	1	1	2	..	..	..	..	..	1	1	..	1	..	..	..	..	1	1	1	6
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	2
2. Pneumonia	4	....	....	4	....	....	3	....	1	3	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	1	1	4
3. Pleurisy	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	5	1	....	6	....	....	5	....	1	4	1	..	..	..	..	..	..	..	..	..	1	..	..	1	1	1	1	..	..	..	..	..	..	1	1	6

DEATHS BY TOWNS IN 1894.—*Continued.*

PEMBROKE.—Population, 4,537.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
2. Cholera Morbus	....	....	....	....	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	5	1	....	6	....	....	6	....	...	6	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	1	1	..	..	..	1	6
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	4	6	...	10	....	....	10	....	....	1	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	1	1	..	..	1	10
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	2	1	....	3	..	....	2	....	1	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	3
8. Scarlatina	2	3	....	5	....	....	5	....	....	2	2	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	2	5
9. Puerperal Fever	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
10. Influenza	2	....	....	1	1	....	1	....	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	2	....	....	2	....	....	1	....	1	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Zymotic Diseases	18	13	....	30	1	....	27	1	3	11	6	7	3	..	1	1	1	1	..	..	..	..	..	4	1	2	1	6	3	3	3	3	..	1	4	31
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Anæmia	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Carcinoma	3	4	....	4	3	..	..	....	7	..	..	..	1	..	2	..	1	1	1	..	1	..	..	..	1	1	..	1	..	2	2	..	..	..	..	7
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Hydrocephalus	....	....	....	....	...	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Phthisis	3	3	....	6	....	...	3	1	2	..	2	..	..	..	..	2	..	2	..	..	..	..	..	..	1	1	..	..	1	..	1	..	..	..	1	1	6
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
10. Other Tubercular Diseases	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
11. Diabetes	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....

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DEATHS BY TOWNS IN 1894.—*Continued.*

PORT HOPE.—Population, 5,198.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	....	....	2	....	....	2	....	....	..	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	1	....	2	....	....	2	....	....	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	2	....	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	2
12. Whooping Cough	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
13. Pyæmia	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	5	2	....	7	...	....	7	....	....	3	2	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2	..	..	1	..	..	1	..	..	7
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
3. Anasarca	1	2	....	2	1	....	1	1	1	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	2	..	..	..	..	..	1	..	..	..	3
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	2
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	3	5	....	6	2	....	2	3	3	..	..	..	..	2	1	..	2	1	..	2	..	..	..	1	2	2	..	..	1	..	..	..	1	..	8
9. Tabes Mesenterica	....	1	....	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1

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DEATHS BY TOWNS IN 1894.—*Continued.*

PORT HOPE.—POPULATION, 5,198.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	7	7	....	7	7	...	5	3	6	..	2	1	1	..	..	1	1	1	3	3	1	..	..	1	1	..	2	..	3	1	1	..	2	1	2	14
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Diseases of Parturition	....	....	....	....	....	...	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	7	5	....	3	9	....	....	5	7	..	..	..	..	..	..	..	..	..	..	..	4	8	..	..	4	2	..	..	2	..	1	.	1	1	1	12
Total Developmental Dis's.	7	5	....	3	9	....	....	5	7	..	..	..	..	..	..	..	..	..	..	..	4	8	..	..	4	2	..	..	2	..	1	.	1	1	1	12
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	....	....	1	1	....	....	...	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	....	....	....	....	....	....	....	...	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
6 Lightning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Street Railway Accidents	....	....	....	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Bicycling	....	....	....	....	....	....	...	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	2	....	....	1	1	....	....	....	2	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	2
Cause not specified	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total from all causes	26	26	....	30	22	....	17	15	20	3	5	2	1	3	3	1	3	2	7	8	6	8	..	4	9	9	3	..	8	1	3	2	5	4	4	52

DEATHS BY TOWNS IN 1894.—*Continued.*

PORTSMOUTH.—Population, 2,037.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum																																			
2. Cholera Morbus	1			1					1									1													1			1
3. Diarrhœa Acuta																																			
4. Dysentaria Acuta																																			
5. Diphtheria and Croup (Cynanche Trachealis)		1		1			1					1														1									1
6. Erysipelas																																			
7. Febris Typhoides	2			2					2						1		1							1								1			2
8. Scarlatina																																			
9. Puerperal Fever																																			
10. Influenza																																			
11. Morbilli																																			
12. Whooping Cough																																			
13. Pyæmia																																			
14. Variola																																			
15. Syphilis																																			
16. Other Zymotic Diseases																																			
Total Zymotic Diseases	3	1		4			1		3			1			1		1	1						1		1					2			4
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor																																			
2. Anæmia																																			
3. Anasarca	1				1				1									1											1						1
4. Asthma																																			
5. Carcinoma	1	1			2		1		1											1		1			1						1			2
6. Rheumatism and Gout																																			
7. Hydrocephalus																																			
8. Phthisis	7	3		8	2			1	9						3		5	1	1						1	1		3	1		1	1		2	10
9. Tabes Mesenterica																																			
10. Other Tubercular Diseases																																			
11. Diabetes																																			

DEATHS BY TOWNS IN 1894.—*Continued.*

PORTSMOUTH.—POPULATION, 2,031.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	9	4	.. .	8	5	...	1	1	11	..	.	..	..	..	3	..	5	2	1	1	..	1	..	..	2	1	.	3	1	1	2	1	..	2	..	13
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Encephalitis	1	....	....	1	....	..	....	....	1	..	.	.	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
4. Epilepsy	2	....	....	2	....	....	....	....	2	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
5. Insanity	....	2	....	2	....	....	1	1	....	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	2	2	....	3	....	1	1	1	2	..	..	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..	1	..	1	..	1	..	..	..	1	4
Total....	5	4	....	8	....	1	2	2	5	..	..	..	.	1	1	1	1	3	1	1	..	..	..	..	1	..	3	..	2	..	1	..	..	1	1	9
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	....	2	....	1	1	....	....	2	....	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	1	....	...	....	1	...	....	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total....	1	2	....	1	2	....	....	2	1	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pneumonia	6	1	....	5	2	....	1	....	6	1	..	..	..	..	..	..	3	..	1	1	1	..	..	..	1	2	2	2	..	..	..	..	..	..	..	7
3. Pleurisy	1	....	...	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	7	1	....	6	2	....	1	....	7	1	..	..	..	..	..	..	3	..	1	2	1	..	..	..	2	2	2	2	..	..	..	..	..	..	..	8

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

RAT PORTAGE.—Population 2,287.

Sex—Nativity—Social condition -Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	2
2. Cholera Morbus	....	1	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
3. Diarrhœa Acuta	1	2	....	3	....	....	3	....	....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	2	....	3	....	....	1	1	1	1	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	3
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	..	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	4	6	....	10	....	....	8	1	1	5	3	..	..	..	..	..	1	1	..	..	..	..	..	2	2	1	..	..	..	1	1	1	..	2	10
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	3	1	....	4	....	....	4	....	....	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	1	..	..	..	4
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	....	9	....	7	1	1	6	2	1	1	1	3	..	1	1	..	..	..	..	..	..	..	2	..	2	1	..	..	2	..	1	1	1	1	9
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

RAT PORTAGE.—Population 2,287.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5 10.	10 15.	15-20.	20 25.	25-30.	30-40.	40 50.	50-60.	60-70.	70 80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	...	....	....	....	....	...	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	..	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	6	5	....	5	2	4	5	....	6	4	..	1	..	..	1	1	..	..	1	2	..	..	1	..	2	1	1	..	1	1	1	1	..	2	11
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	....	...	1	1	....	....	1	..	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
2. Diseases of Parturition	...	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Diseases of Old Age	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Total Developmental Dis's.	1	1	1	2	....	1	1	1	1	1	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	1	..	..	..	..	..	..	.	1	..	3
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Wounds and other Accidents	1	....	....	....	1	..	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	..	...	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	6	....	....	3	....	3	....	....	6	..	..	..	..	..	1	1	2	..	..	..	..	..	2	..	..	..	1	..	..	..	..	2	3	..	..	6
Total Violent Deaths	7	....	....	3	1	3	....	....	7	..	..	..	..	..	2	1	2	..	..	..	..	..	2	..	..	..	1	..	1	..	..	2	3	..	..	7
Cause not specified	7	3	....	10	....	....	5	....	5	5	2	..	..	..	..	.	1	1	..	..	.	..	1	1	1	..	..	1	..	1	2	1	2	..	1	10
Total from all causes	28	26	1	41	5	9	29	4	22	19	7	4	..	1	4	2	5	3	1	2	1	..	6	4	7	4	5	1	5	2	5	7	8	1	6	55

DEATHS BY TOWNS IN 1894.—*Continued.*

SARNIA.—Population, 6,689.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	1	....	3	..	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	..	3
2. Cholera Morbus	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	....	1	..	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
4. Dysentaria Acuta	1	1	....	1	1	..	....	....	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
5. Diphtheria and Croup (Cynanche Trachealis)	2	1	....	3	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	1	....	1	....	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	3	....	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	3
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	9	5	....	13	1	....	12	....	2	8	3	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	1	5	2	2	1	1	14
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	..	....	....	..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	....	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Anasarca	....	....	....	....	....	....	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	....	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY TOWNS IN 1894.—*Continued.*

SARNIA.—Population, 6,689.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20 25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																		
12. Other Constitutional Diseases.	....	....	....	....	....	....	...	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	....	3	....	....	2	1	...	1	2	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	1	..	..	..	..	..	..	..	1	1	3
NERVOUS DISEASES.																																			
1. Apoplexy.....	3	1	....	....	4	....	..	1	3	..	..	..	..	..	..	..	..	..	..	2	2	..	..	2	..	..	1	..	..	1	..	..	..	..	..	4
2. Convulsions.....	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2
3. Encephalitis	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis..... ..	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total ...	5	3	....	4	4	....	4	1	3	3	1	..	..	..	..	..	..	..	..	2	2	..	..	2	..	1	2	..	..	1	1	..	..	1	..	8
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis.....	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart.	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris.	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2
6. Aneurism.	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Total....	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
2. Pneumonia.....	4	2	....	1	4	1	2	1	3	..	2	..	..	..	..	..	1	..	..	2	..	..	1	..	..	1	3	1	..	..	..	..	1	..	..	6
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	5	3	....	3	4	1	4	1	3	1	3	..	..	..	..	..	1	..	..	2	..	..	1	..	..	1	3	2	..	..	..	..	2	..	..	8

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

SAULT ST MARIE.—POPULATION, 2,534.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Cholera Morbus	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	....	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1
8. Scarlatina	1	....	....	1	....	....	1	....	....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	4	1	....	4	....	1	4	....	1	1	2	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	..	..	..	1	..	1	..	5
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

SAULT ST. MARIE.—Population, 2,534.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30 40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Total Local Diseases	5	2	....	2	1	4	....	2	5	..	..	..	..	..	..	1	1	..	1	..	2	..	2	..	2	..	..	..	1	2	1	..	1	..	7
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Diseases of Parturition	....	1	....	....	....	1	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1
3. Diseases of Old Age	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Developmental Dis's.	...	1	....	....	....	1	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	...	....	....	....	...	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowned	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	1	....	....	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1
Cause not specified	1	1	1	2	....	1	2	....	1	2	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	1	..	..	..	3
Total from all causes	11	6	1	8	1	9	6	3	9	3	2	1	..	..	..	1	1	..	1	..	2	..	7	..	4	..	2	1	2	1	4	2	..	2	..	18

DEATHS BY TOWNS IN 1894.—*Continued.*

TILSONBURG.—POPULATION, 2,227.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1			1			1			1																				1					1
2. Cholera Morbus			..																																
3. Diarrhœa Acuta																																			
4. Dysentaria Acuta																																			
5. Diphtheria and Croup (Cynanche Trachealis)	1			1			1			1	1																1								1
6. Erysipelas																																			
7. Febris Typhoides	2	2		4			2		2					2			1	1													1		2	1	4
8. Scarlatina	1			1			1			1																				1					1
9. Puerperal Fever																																			
10. Influenza		1			1				1													1					1								1
11. Morbilli																																			
12. Whooping Cough	1			1			1			1																	1								1
13. Pyæmia																																			
14. Variola																																			
15. Syphilis								..																											
16. Other Zymotic Diseases																																			
Total Zymotic Diseases	6	3		8	1		6		3	3	1			2			1	1				1					2	1		2	1		2	1	9
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor																																			
2. Anæmia																																			
3. Anasarca																																			
4. Asthma																																			
5. Carcinoma																																			
6. Rheumatism and Gout																																			
7. Hydrocephalus																																			
8. Phthisis	2			2			1	..	1	1										1				1								1		1
9. Tabes Mesenterica																																			
10. Other Tubercular Diseases																																			
11. Diabetes	1				1				1											1												1		2

DEATHS BY TOWNS IN 1894.—*Continued.*

TILSONBURG.—POPULATION, 2,227.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40 50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	3	....	....	2	1	....	1	....	2	1	..	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..	..	..	..	..	..	2	..	3
NERVOUS DISEASES.																																			
1. Apoplexy	....	1	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1
2. Convulsions	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
3. Encephalitis	1	1	..	1	1	....	1	....	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	2
4. Epilepsy	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	2	2	....	2	2	....	2	....	2	1	..	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	2	..	..	1	4
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	1	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	1	1	....	1	1	....	....	....	2	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Pneumonia	1	2	....	2	1	....	1	....	2	..	1	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	3
3. Pleurisy	..	1	....	1	..	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	2	3	....	3	2	....	1	....	4	..	1	..	..	..	1	1	..	..	..	2	..	..	..	1	1	..	1	..	..	..	..	..	..	1	1	5

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

TORONTO JUNCTION.—Population, 5,000.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	1	2	....	3	....	....	3	....	....	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	3
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	1	....	2	....	....	1	1	....	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	4	5	....	8	1	...	7	2	....	6	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	2	1	2	1	2	9
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	....	2	....	....	2	....	....	2	....	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
6. Rheumatism and Gout	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	....	2	...	1	1	....	....	1	1	.	..	..	..	1	.	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

TORONTO JUNCTION.—POPULATION, 5,000.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Total Local Diseases	15	5	....	15	5	....	15	2	3	12	1	..	1	1	..	..	..	..	1	2	2	..	..	2	..	1	2	4	1	2	1	3	..	1	3	20
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	10	6	....	16	....	....	16	....	....	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	1	3	..	..	3	1	1	3	..	16
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Total Developmental Dis's.	10	7	....	16	1	....	16	....	1	16	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	3	1	4	..	..	3	1	1	3	..	17
VIOLENT DEATHS.																																			
1. Railroad Accidents	2	....	....	1	1	....	....	....	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2
2. Wounds and other Accidents	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Lightning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	3	1	....	3	1	....	1	1	2	1	..	..	..	..	1	1	1	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	1	..	4
Cause not specified	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	34	22	..	43	13	....	39	8	9	35	1	..	2	2	1	2	2	3	2	2	4	..	..	4	4	5	3	9	1	3	6	6	4	5	6	56

DEATHS BY TOWNS IN 1894.—*Continued.*

WATERLOO.—Population, 3,028.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum																																			
2. Cholera Morbus																																			
3. Diarrhœa Acuta		2		2			2			2																				2					2
4. Dysentaria Acuta																																			
5. Diphtheria and Croup (Cynanche Trachealis)																																			
6. Erysipelas																																			
7. Febris Typhoides	1	1	..	2			2			1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
8. Scarlatina																																			
9. Puerperal Fever																																			
10 Influenza																																			
11. Morbilli																																			
12 Whooping Cough																																			
13. Pyæmia																																			
14. Variola																																			
15. Syphilis		1		1			1								1											1									1
16. Other Zymotic Diseases																																			
Total Zymotic Diseases	1	4		5			5			3	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	1	1	..	..	5
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor																																			
2. Anæmia																																			
3. Anasarca																																			
4. Asthma																																			
5. Carcinoma																																			
6. Rheumatism and Gout																																			
7. Hydrocephalus																																			
8. Phthisis	1			1					1						1																1				1
9. Tabes Mesenterica																																			
10. Other Tubercular Diseases																																			
11. Diabetes																																			

DEATHS BY TOWNS IN 1894.—*Continued.*

WATERLOO.—Population, 3,028.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70 80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Convulsions	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	2
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Total	2	1	....	2	1	....	2	....	1	1	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	1	..	..	..	3
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	1
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	....	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
2. Pneumonia	....	1	....	1	....	....	1	....	....	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	1	1	....	2	....	....	2	....	....	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	2

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

WALKERTON.—Population, 3,151.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10 15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Cholera Morbus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Dysentaria Acuta	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Diphtheria and Croup (Cynanche Trachealis)	5	4	..	9	..	..	9	..	..	1	3	5	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	1	..	1	..	2	1	..	9
6. Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Scarlatina	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
9. Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	2	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
11. Morbilli	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Pyæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Zymotic Diseases	8	4	..	11	1	..	10	..	2	2	3	5	..	..	..	..	..	1	..	..	1	..	..	1	1	1	2	1	1	..	1	1	2	1	..	12
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Anæmia	2	..	..	2	..	..	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2
3. Anasarca	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
4. Asthma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Carcinoma	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
6. Rheumatism and Gout	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
7. Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Phthisis	2	2	..	4	..	..	1	1	2	..	..	..	..	1	..	1	1	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	4
9. Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	..	1	..	1	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

WALKERTON.—Population 3,151.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION																																			
1. Arthritis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	5	6	....	9	2	....	7	1	3	..	3	..	2	1	..	..	..	1	1	..	3	..	..	2	1	1	1	1	3	..	..	..	..	2	..	11
DEVELOPMENTAL DISEASES																																			
1. Diseases of Pre-natal Period	.. .	2	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2
2. Diseases of Parturition	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Diseases of Old Age	....	1	....	....	1	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total Developmental Dis's.	....	3	....	2	1	....	2	1	....	2	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	1	..	1	..	..	..	..	..	..	3
VIOLENT DEATHS.																																			
1. Railroad Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Drowning	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total Violent Deaths	1	....	....	1	..	...	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Cause not specified	....	....	...	....	....	...	....	...	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total from all causes	18	19	....	30	7	....	24	6	7	5	8	5	2	3	..	1	1	3	3	..	5	1	..	5	3	2	7	3	5	..	1	1	3	4	3	37

DEATHS BY TOWNS IN 1894.—*Continued.*

WELLAND.—POPULATION, 2,095.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Diphtheria and Croup (Cynanche Trachealis)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6. Erysipelas	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Febris Typhoides	1	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
8. Scarlatina	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Influenza	....	1	....	....	1	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
11. Morbilli	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
14. Variola	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
15. Syphilis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total Zymotic Diseases	1	1	....	1	1	....	1	....	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	2
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
2. Anæmia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3. Anasarca	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
4. Asthma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
5. Carcinoma	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
8. Phthisis	1	1	....	1	1	....	1	....	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
11. Diabetes	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

WELLAND.—Population, 2,095.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.										Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases	1	1	....	1	1	....	1	....	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2
NERVOUS DISEASES.																																			
1. Apoplexy	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	2
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Encephalitis	....	1	....	1	....	....	..	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
6. Meningitis	....	1	....	1	....	...	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Paralysis	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Total	2	3	....	3	2	....	....	3	2	..	..	..	..	..	..	.	..	..	1	2	2	..	..	..	..	1	1	..	..	..	..	2	..	1	..	5
DISEASES OF CIRCULATION.																																			
1. Endocarditis	...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Valvular Diseases	2	....	....	2	....	....	....	....	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	1	..	..	..	2
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Syncope	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Total	3	....	...	2	1	....	....	....	3	..	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..	..	..	..	..	1	..	..	1	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Pneumonia	....	4	..	4	....	....	3	1	....	2	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	4
3. Pleurisy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total	....	4	....	4	....	....	3	1	....	2	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	4

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DEATHS BY TOWNS IN 1894.—*Continued.*

WOODSTOCK.—Population 8,880.

Sex—Nativity—Social condition -Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	1	3	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	1	..	..	..	4
2. Cholera Morbus	....	1	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diarrhœa Acuta	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
4. Dysentaria Acuta	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1
5. Diphtheria and Croup (Cynanche Trachealis)	4	4	....	8	....	....	8	....	....	1	3	2	2	..	..	..	..	..	..	..	..	..	..	6	1	..	1	..	..	..	..	..	..	..	..	8
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
7. Febris Typhoides	2	2	....	3	1	....	1	2	1	..	..	..	..	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	..	4
8. Scarlatina	3	....	....	3	....	....	3	....	....	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	3
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Influenza	....	1	....	....	1	..	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16. Other Zymotic Diseases	2	....	....	1	1	...	..	..	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2
Total Zymotic Diseases	14	11	....	21	4	....	18	3	4	7	5	3	2	1	2	1	..	1	2	..	..	1	..	7	1	..	2	1	..	2	2	6	3	..	1	25
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	..	1	....	....	1	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
2. Anæmia	2	1	....	..	3	....	....	1	2	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	3
3. Anasarca	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Carcinoma	1	2	....	....	3	....	....	1	2	..	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	1	..	1	..	1	..	..	3
6. Rheumatism and Gout	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
8. Phthisis	12	8	...	20	....	....	7	5	8	..	..	..	..	3	4	5	5	2	..	1	..	..	..	1	1	1	2	1	2	2	1	2	3	..	4	20
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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DEATHS BY TOWNS IN 1894.—*Continued.*

WOODSTOCK.—Population 8,880.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Local Diseases	17	27	....	23	21	....	16	16	12	8	3	2	1	1	..	..	2	5	6	5	7	4	..	7	4	8	3	1	3	2	7	2	1	3	3	44
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	8	3	....	11	....	....	11	..	....	11	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	4	1	..	1	2	1	..	..	..	11
2. Diseases of Parturition	....	2	....	2	....	....	....	2	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
3. Diseases of Old Age	6	4	....	2	8	....	1	4	5	..	..	..	..	..	1	1	..	..	..	..	5	5	..	1	1	2	..	..	..	1	2	1	2	..	..	10
Total Developmental Dis's.	14	9	..	15	8	....	12	6	5	11	..	..	..	..	1	1	..	..	..	..	5	5	..	1	2	5	4	1	..	2	4	2	2	..	..	23
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
2. Wounds and other Accidents	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Murder and Homicide	....	....	..	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
5. Drowning	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Violent Deaths	2	....	....	1	1	....	....	....	2	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	2
Cause not specified	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total from all causes	64	59	....	82	41	....	54	32	37	26	8	5	3	5	7	9	7	10	10	9	14	10	..	16	8	16	12	5	6	9	15	13	11	4	8	123

DEATHS BY TOWNS IN 1894.—*Continued.*

ALMONTE.—Population, 3,159.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	....	1	....	1	..	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	1	....	..	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	....	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Scarlatina	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	3	1	....	4	....	....	4	....	....	2	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	..	1	..	..	..	4
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	1	....	....	1	..	....	1	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
2. Anæmia	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
3. Anasarca	1	1	....	....	2	....	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2	..	..	..	..	2
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	3	3	....	4	1	1	....	3	3	..	..	..	..	1	3	..	1	..	1	..	..	..	..	..	..	1	..	1	1	..	1	..	1	..	6
9. Tabes Mesenterica	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY TOWNS IN 1894.—*Continued.*

ALMONTE.—Population, 3,159.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases.	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Constitut'l Diseases.	6	5	....	7	3	1	1	5	5	..	..	..	..	1	1	3	..	2	1	2	1	..	..	1	..	2	..	1	1	2	2	..	.1	1	..	11
NERVOUS DISEASES.																																			
1. Apoplexy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Convulsions	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Encephalitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Necrencephalus	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total...	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart.	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris.	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	1	1	....	1	1	....	....	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
6. Aneurism.	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Total...	1	2	....	2	1	....	....	2	1	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	1	..	1	1	3
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	....	....	....	....	....	....	....	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
2. Pneumonia	2	1	....	2	1	....	....	1	2	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1	..	..	..	..	1	..	..	..	..	1	..	3
3. Pleurisy	....	....	....	....	1	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	2	1	....	2	2	..	....	1	3	..	..	..	..	..	..	..	1	..	1	1	..	1	..	1	..	..	..	..	1	..	..	..	..	1	1	4

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DEATHS BY TOWNS IN 1894.—*Continued.*

BROCKVILLE.—POPULATION, 9,063.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.											Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	3	2	....	5	....	....	5	....	....	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	2	..	..	1	..	5
2. Cholera Morbus	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Diarrhœa Acuta	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	3	2	....	5	....	....	5	....	....	..	3	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1	1	1	5
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	3	4	..	4	3	....	2	2	3	..	..	..	1	1	..	1	2	2	..	..	..	..	..	..	..	..	..	..	..	..	1	2	2	2	..	7
8. Scarlatina	....	2	....	2	....	....	2	....	....	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Morbilli	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
12. Whooping Cough	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
13. Pyæmia	....	2	..	2	....	....	1	1	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Total Zymotic Diseases	12	15	....	24	3	....	20	3	4	10	6	1	2	1	..	1	2	3	1	..	..	..	..	1	..	1	1	..	2	3	8	3	3	4	1	27
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	1	....	....	1	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
2. Anæmia	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1
3. Anasarca	1	....	....	1	....	....	1	....	....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	1	3	....	3	1	....	....	3	1	..	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	..	4
6. Rheumatism and Gout	....	....	....	..	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	1	....	....	....	1	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
8. Phthisis	6	10	....	13	3	..	4	6	6	1	..	..	1	2	1	1	3	4	2	1	..	..	..	..	1	1	2	1	6	2	1	..	..	1	1	16
9. Tabes Mesenterica	....	1	....	....	1	..	....	1	....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

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DEATHS BY TOWNS IN 1894.—*Continued.*

BROCKVILLE.—POPULATION, 9,063.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30 40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Ostitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Other Locomotor Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Local Diseases	20	18	....	28	10	....	9	10	19	2	3	..	3	..	3	1	..	4	5	6	10	1	..	3	5	3	3	2	4	2	4	4	4	..	4	38
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	4	3	....	7	....	....	7	....	....	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	3	..	..	..	..	7
2. Diseases of Parturition	....	1	....	1	....	....	....	1	....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
3. Diseases of Old Age	4	5	...	1	8	....	1	4	4	..	..	..	..	..	..	..	..	..	..	4	5	..	..	..	1	1	..	..	1	1	2	1	..	1	1	9
Total Developmental Dis's	8	9	....	9	8	....	8	5	4	7	..	..	..	..	..	..	1	..	..	..	4	5	..	..	2	3	..	..	2	2	5	1	..	1	1	17
VIOLENT DEATHS.																																			
1. Railroad Accidents	1	....	...	1	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
2. Wounds and other Accidents	1	....	....	1	....	....	....	....	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
3. Murder and Homicide	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Suicide	1	....	....	1	....	...	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
5 Drowned	1	1	...	2	....	....	2	....	....	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
Total Violent Deaths	4	1	....	5	....	....	2	....	3	..	..	1	..	..	2	1	..	1	..	..	..	..	..	..	1	1	..	..	1	1	1	..	..	..	..	5
Cause not specified	4	1	....	4	1	....	2	1	2	1	..	..	..	1	..	..	..	..	2	..	1	..	..	..	..	..	1	..	..	..	1	..	3	..	..	5
Total from all causes	57	62	....	90	29	....	49	31	39	21	10	2	6	4	7	4	9	13	13	9	15	6	..	4	10	10	9	5	15	10	24	9	10	6	7	119

DEATHS BY TOWNS IN 1894.—*Continued.*

BARRIE.—POPULATION, 5,732.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50 60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum	2	....	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
2. Cholera Morbus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Diarrhœa Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
4. Dysentaria Acuta	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Diphtheria and Croup (Cynanche Trachealis)	2	1	..	....	3	....	3	....	....	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	..	3
6. Erysipelas	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Febris Typhoides	1	....	....	1	....	....	....	....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
8. Scarlatina	2	3	....	5	....	....	5	....	....	..	2	2	1	..	..	..	..	..	..	..	..	..	..	..	1	2	1	1	..	..	..	..	..	..	5
9. Puerperal Fever	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
10. Influenza	1	....	....	....	1	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1
11. Morbilli	1	....	....	1	....	....	1	....	....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
12. Whooping Cough	1	3	....	4	....	....	4	....	....	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1	..	..	..	..	4
13. Pyæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
14. Variola	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
15. Syphilis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
16. Other Zymotic Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
Total Zymotic Diseases	10	7	....	13	4	...	15	....	2	6	3	4	2	..	..	1	..	..	..	..	1	..	..	..	3	4	3	3	..	1	2	..	1	..	17
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor	....	1	....	1	....	....	1	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
2. Anæmia	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
3. Anasarca	1	....	....	1	....	...	....	...	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
4. Asthma	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
5. Carcinoma	2	1	....	1	2	....	....	1	2	..	..	..	..	..	..	..	..	..	..	2	1	..	..	1	..	..	1	..	..	1	..	..	..	..	3
6. Rheumatism and Gout	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
7. Hydrocephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
8. Phthisis	6	3	...	6	3	....	2	1	6	1	..	..	1	2	..	2	..	1	2	..	..	..	..	..	1	1	..	..	1	1	..	1	1	2	9
9. Tabes Mesenterica	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
10. Other Tubercular Diseases	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....
11. Diabetes	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....

DEATHS BY TOWNS IN 1894.—*Continued.*

BARRIE.—Population, 5,732.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
CONSTITUT'L DISEASES.—*Con.*																																			
12. Other Constitutional Diseases	....	...	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total Constitut'l Diseases.	10	6	....	11	5	....	5	2	9	4	..	..	..	1	2	..	2	..	1	5	1	..	..	1	1	1	1	1	2	2	..	2	2	2	2	16
NERVOUS DISEASES.																																			
1. Apoplexy	2	....	....	1	1	....	..	....	2	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	2
2. Convulsions	1	1	....	2	....	....	2	....	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2
3. Encephalitis	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Epilepsy	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Insanity	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
6. Meningitis	2	1	....	3	....	....	3	....	....	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	1	3
7. Necrencephalus	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
8. Paralysis	1	2	....	2	1	....	....	2	1	..	..	..	..	..	..	..	..	..	1	..	2	..	..	..	1	..	1	..	1	..	..	..	..	..	..	3
Total....	6	4	....	8	2	....	5	2	3	4	..	..	1	1	..	..	..	..	1	..	2	1	..	..	1	1	3	2	1	..	..	..	..	1	1	10
DISEASES OF CIRCULATION.																																			
1. Endocarditis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
2. Pericarditis	....	..	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
3. Hypertrophy of Heart	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Angina Pectoris	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
5. Valvular Diseases	3	1	....	2	2	....	1	....	3	..	..	..	..	..	..	..	..	..	1	..	2	1	..	..	..	..	..	..	..	..	..	..	1	3	..	4
6. Aneurism	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
7. Syncope	3	3	....	3	3	....	....	3	3	..	..	..	..	..	1	..	..	1	1	2	1	..	..	1	1	1	1	..	..	..	..	1	..	..	1	6
Total....	6	4	....	5	5	....	1	3	6	..	..	..	..	..	1	..	..	2	1	4	2	..	..	1	1	1	1	..	..	..	..	1	1	3	1	10
DISEASES OF RESPIRATION.																																			
1. Bronchitis	1	1	....	2	....	....	2	....	....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	2
2. Pneumonia	....	2	....	2	....	....	1	1	....	1	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2
3. Pleurisy	..	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
4. Laryngitis	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.....
Total....	1	3	....	4	....	....	3	1	....	2	1	..	..	..	..	..	..	1	..	..	..	..	..	1	1	..	1	..	..	..	..	..	1	..	..	4

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

BRAMPTON.—POPULATION, 3,352.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.											Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 yr.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
ZYMOTIC DISEASES.																																			
1. Cholera Infantum		1		1			1				1																			1					1
2. Cholera Morbus																																			
3. Diarrhœa Acuta		1		1			1				1													1											1
4. Dysentaria Acuta																																			
5. Diphtheria and Croup (Cynanche Trachealis)																																			
6. Erysipelas																																			
7. Febris Typhoides																																			
8. Scarlatina	1			1			1				1															1									1
9. Puerperal Fever																																			
10. Influenza																																			
11. Morbilli																																			
12. Whooping Cough																																			
13. Pyæmia		1		1				1									1																1		1
14. Variola																																			
15. Syphilis																																			
16. Other Zymotic Diseases																																			
Total Zymotic Diseases	1	3		4			3	1			3						1							1		1				1			1		4
CONSTITUTIONAL DISEASES.																																			
1. Abscess or Tumor																																			
2. Anæmia		1				1		1											1														1		1
3. Anasarca																																			
4. Asthma																																			
5. Carcinoma	2	1		1	2			1	2										2	1							1		1				1	3
6. Rheumatism and Gout		1		1				1											1														1		1
7. Hydrocephalus																																			
8. Phthisis	1	1		2			1	1							1				1													1		1	2
9. Tabes Mesenterica																																			
10. Other Tubercular Diseases																																			
11. Diabetes	1			1					1											1										1				1

| | | |

DEATHS BY TOWNS IN 1894.—*Continued.*

BRAMPTON.—POPULATION, 3,352.

Sex—Nativity—Social condition—Age—Month.

Cause of death.	Sex.			Nativity.			Social condition.			Ages.												Months.												Total.
	Male.	Female.	Not stated.	Canada.	Foreign.	Not stated.	Single.	Married.	Not stated.	Under 1 y'r.	1-5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80 and over.	Not given.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November	December.	
DISEASES OF LOCOMOTION.																																			
1. Arthritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Ostitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Other Locomotor Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Local Diseases	3	5	..	7	1	..	2	3	3	1	..	1	..	..	1	..	1	2	1	1	..	..	..	2	..	..	1	..	..	..	..	1	1	1	2	8
DEVELOPMENTAL DISEASES.																																			
1. Diseases of Pre-natal Period	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Diseases of Parturition	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Diseases of Old Age	3	..	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	2	..	..	3
Total Developmental Dis's.	3	..	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	1	2	..	..	3
VIOLENT DEATHS.																																			
1. Railroad Accidents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Wounds and other Accidents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Murder and Homicide	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
4. Suicide	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5. Drowning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
6. Lightning	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Violent Deaths	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cause not specified	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total from all causes	11	12	..	16	6	1	6	8	9	1	3	1	..	1	1	..	2	2	3	4	2	3	..	3	..	1	1	1	..	1	1	2	3	6	4	23

REPORT

OF THE

INSPECTOR OF LEGAL OFFICES,

1895.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, ETC., 68 AND 70 FRONT ST WEST.
1896.

THIRTEENTH ANNUAL REPORT

OF THE

INSPECTOR OF LEGAL OFFICES.

To His Honor the Honorable GEORGE AIREY KIRKPATRICK, *Lieutenant-Governor of the Province of Ontario*:

SIR,—I have the honor to present the thirteenth annual report of the Inspector of Legal Offices upon the affairs and condition of the judicial and administrative offices under my inspection for the year ending the 31st December, 1895.

The following officers have been appointed during the year:

Sheriffs.—George F. Hope, Esquire, gazetted as Sheriff of the County of Hastings on the 11th May, in the room and stead of William Hope, Esquire, deceased; George Douglas Hawley, Esquire, gazetted as Sheriff of the county of Lennox and Addington on the 18th May, in the room and stead of Oliver Thatford Pruyn, Esquire, deceased; Samuel Armstrong, Esquire, gazetted as Sheriff of the District of Parry Sound on the 18th May, in the room and stead of Henry Armstrong, Esquire, deceased.

Local Masters.—John Alexander Mackenzie, Esquire, Junior Judge of the County of Lambton, gazetted to be a Local Master of the High Court of Justice in and for the said county on the 19th January; Francis Fitzgerald, Esquire, District Judge of the District of Thunder Bay, on his appointment became Local Master of the High Court of Justice for the Districts of Thunder Bay and Rainy River.

Local Registrars, etc.—William Allan McLean, Esquire, Deputy Registrar, gazetted on 19th January as Local Registrar of the High Court of Justice in and for the County of Bruce; Matthew Goetz, Esquire, gazetted on the 4th May to be Clerk of the County Court and Registrar of the Surrogate Court in and for the County of Bruce; J. P. Featherstone, Esquire, the Deputy Clerk of the Crown in and for the County of Carleton, became the Acting Local Registrar of the said Court on the death of W. M. Matheson, Esquire, the Deputy Registrar for the said county; Edward Jordan, Esquire, gazetted on the 5th January to be the Local Registrar of the High Court, Surrogate Registrar and Clerk of the District Court in and for the District of Parry Sound, in the room and stead of Richard Hardinge Stewart, Esquire, deceased.

County Attorneys and Clerks of the Peace.—Stanley Clarke Warner, Esquire, gazetted on the 30th November to be the County Crown Attorney and Clerk of the Peace in and for the County of Lennox and Addington, in the room and stead of Amzi Lewis Morden, Esquire, deceased; Henry Langford, Esquire, gazetted on the 15th June to be the Crown Attorney and Clerk of the Peace in and for the District of Rainy River.

District of Nipissing.

Under the statute 57 Vic., cap. 33, the Temporary Judicial District of Nipissing was formed into a Provisional Judicial District on the 1st January, 1895. The following officers were appointed:

Arthur George Browning, Esquire, gazetted on the 16th February to be the Crown Attorney and Clerk of the Peace in and for the said district; Henry Charles Varin, Esquire, gazetted on the 16th March to be the Sheriff of the said district; Joseph Alphonse Valin, Esquire, the District Judge of the said district, gazetted on the 13th April to be the Local Master of the High Court of Justice; Thomas John Bourke, Esquire, gazetted on the 4th May to be the Local Registrar of the High Court of Justice, Clerk of the District Court and Registrar of the Surrogate Court in and for the said district.

By an order of the Lieutenant-Governor in Council, dated the 24th August, 1895, the town of North Bay was named as the district town of the said Provisional Judicial District of Nipissing.

Sheriffs' Offices.

The work in these offices has been very satisfactorily done during the past year. Such a thing as delay in the execution of process, or in the payment over of moneys made under execution, is a rare exception to the prevailing general rule of prompt action in these matters. I find still some of the sheriffs do not fully appreciate the importance of making full and particular entries in the execution book of proceedings taken under the writs. The execution book should so show at any time all the proceedings taken that a stranger making an examination of the book could tell the exact position of any writ in the sheriff's hands. I hope during the coming year to find the books so kept in all the offices as they are now in the large majority of them. There have been fewer references to me in the past year than formerly, of questions arising between these officers and solicitors. In offices where the execution book in the old form has not been filled up, I have not insisted that new ones should be procured in the form approved by me in 1894 and adapted to the changed practice brought into force on 1st January last, under which execution against goods and lands are included in one writ. Rule 1,503, of the Rules of Practice of 1st January, 1896, directs the sheriff that a return as to goods in respect of such writs is to be made by certificate, in the form prescribed in the rule.

In Appendix A I have set out in tabulated form the statistical returns made by the sheriffs for the past year.

Local Masters.

The Rules of Practice which were issued on 1st January, 1896, make some changes in respect to these officers. The fee of $1 formerly charged for attendance on motion in chamber has been abolished. This makes the fee the same, fifty cents, on obtaining a chamber order, whether it be made by the Master in Chambers, the Local Judge or Local Master. This fee is payable in money to the Local Master, not paid by salary, and in other cases in stamps. Under Rule 1,402, on the conclusion of proceedings before a Master or Referee he shall annex together all the papers in the action or matter before him and transmit the same to the office in which the proceedings were commenced, to be deposited with the other papers in the action or matter. The party having the conduct of the matter or

reference, will of course be required to pay the postage or express charges necessary in such case. I trust this rule may be carefully observed and promptly carried out.

There has been some complaint that references have been made unnecessarily expensive by being unduly prolonged. It is difficult to fix the blame in cases where such a complaint appears to be well founded. The solicitors are sometimes prolix and unnecessarily minute in their examinations, and it is not always easy for the Master, even if disposed, to shorten the proceedings. There are very few instances in which there seems to be ground for charging the Master with a wilful disregard of the rule in this respect, though in some cases too much latitude seems to be allowed to solicitors, particularly in the granting of adjournments. The practice fixed by Rule 52 should not be relaxed without reasons other than the convenience of solicitors. The power of the taxing officers at Osgoode Hall on revision of taxations to disallow costs which are incurred in infraction of this rule provides some check against loose practice in this respect. It is hoped it will soon be learned by officers and solicitors alike that their interests will be best promoted by more speedily and inexpensively bringing references to a conclusion.

The statistical returns of the business done in the offices of the Local Masters for 1895 are tabulated in Appendix B.

Local Registrars, Deputy Registrars, Deputy Clerks of the Crown and County Court Clerks.

The work in these offices has been well kept up. In some cases small arrears in copying were found where the officers' illness had interfered with their duties, but in all these cases the arrears are being worked off with reasonable speed. In the manner of taxing costs a general improvement is observed. These officers have the advantage of an occasional, if not frequent, inspection of bills revised by the taxing officers, in which the principles of allowing or disallowing particular items are exemplified, and thus they acquire a fair knowledge of a difficult duty which they could hardly gain from their own limited practice. I have also had to advise in a number of cases on matters of taxation.

The correspondence with these officers has been considerably larger than usual, in consequence of the number of changes introduced in the practice of the courts during the past two years. I have at once furnished all officers interested with copies of the new rules as they have been issued. Further changes have been made by the rules introduced on 1st January, 1896. Actions may now be commenced in the office of a Deputy Registrar in counties where such an office exists, as well as in that of the Deputy Clerk of the Crown. The Deputy Clerk of the Crown will be the Clerk of Assize at all sittings of the court for trial of actions with a jury, while the Deputy Registrar will act at the non-jury sittings. The same fee, $2, is payable on the entry of the record in either case. The additional fee of $3 in jury cases to be paid over to the County Treasurer under the Jury Act will be charged as heretofore. The Judicature Act of 1895, section 131, requires a fee of $1 to be paid in every civil case entered for trial for the purposes of the Reporter's Fund. This is to be taken in money and transmitted, with the return named in the section, to George S. Holmested, Esquire, accountant of the Supreme Court of Judicature at Osgoode Hall, Toronto, who is the officer appointed by Order in Council to receive the same. The return should contain a list of the cases entered. This section does not apply to County Courts.

In the course of my inspection I have observed that considerable difference exists in different offices in the manner of taking and recording bail in open court

by the Clerks of Assize and Clerks of the Peace. To prevent the serious consequences of irregularity in this respect, the following hints may be of use to the officers: The parties entering into the recognizance must be severally asked if they are content to acknowledge to owe to our Sovereign Lady the Queen, etc., the sums in which they are severally to be bound, on the condition in the recognizance, which must be fully stated For this purpose they may be addressed in the second person, following the words of the recognizance, which ought, if possible, to be first filled up. The recognizance should then be signed by the Clerk of Assize—it need not be signed by the parties bound—and an entry made in the book of the Clerk of Assize, or minutes of sessions, fully setting out dates, names, sums and conditions. The recognizance should be kept and returned to the Crown office with the indictment, I would recommend that proper blank forms for this purpose should form part of the supply furnished to the officers by the Clerk of the Process. In the meantime, the following form may be useful:

Recognizance to Bail.

ONTARIO. } Be it remembered that on the day of in
County (or united } the year of our Lord one thousand eight hundred and
counties) of } ninety , and in the fifty year of the reign of Her
To wit: } Majesty Queen Victoria, at the sittings of Oyer and Terminer and General Gaol Delivery of the High Court of Justice for Ontario (or at the sittings of the General Sessions of the Peace or County Judge's Criminal Court, as the case may be), now being held in and for the county (or united counties) of at the city (or town) of , *A. B.*, of etc., *C. D.*, of etc., and *E. F.*, of etc., personally came before the said court and in open court acknowledged themselves to owe to our Sovereign Lady the Queen, Her heirs and successors, the sums following, that is to say: The said *A. B.* the sum of and the said *C. D.* and *E. F.* each the sum of of good and lawful money of Canada, to be made and levied on the goods and chattels, lands and tenements of the said *A. B.*, *C. D.* and *E. F.*, respectively, to the use of our Sovereign Lady the Queen, Her heirs and successors. if the said *A. B.* fails in performing the condition hereunder written.

Taken and acknowledged the day and year first above written in open court.

X. Y.,

Clerk of Assize (or Clerk of the Peace.)

The condition of the above written recognizance is such that if the said above bounden *A. B.* shall personally appear at (naming the court, etc., to be holden, etc.), then and there to take his trial in a certain indictment found against him by the grand jury of the said county (or united counties) on a charge of , and do not depart the said court without leave, then this recognizance is void, or else to stand in full force and virtue. Are you content?

A case has come to my notice in which a judgment was entered upon the rough minutes settled by the Senior Registrar and without filing the record. This practice is not the proper one. The judgment should only be entered on production of a fair engrossment thereof, signed by the officer settling it; and the record should in all cases be filed.

Complaints have been made to me that some of the officers do not make prompt returns of judgments to the proper office (now the Central Office), under Rule 21. Their delay in this respect occasions delay and trouble in indexing in the Central Office.

Schedule C is a tabulated statement of the returns of Local and Deputy Registrars and Deputy Clerks of the Crown, and Schedule D a like statement of the returns of County Court Clerks for 1895.

Surrogate Registrars.

In my inspection during the year I found in some of the offices that stamps had not been properly affixed to the papers. The whole amount of these omissions was about $500. In all cases I caused the proper stamps to be put on and cancelled. The books have generally been fully entered up to date from day to day, but in a few offices I found the copying of wills and bonds into the registers to be in arrear. This was in most cases due to illness of the officers.

During the year I have had to answer a great many inquiries in respect of matters of surrogate practice. Among them has been the question of the practice to be followed in the granting of Ancillary Probates and Letters of Administration under 51 Vic., cap. 9; which was brought into force by proclamation of the Lieutenant-Governor, dated 10th June, 1893. At first sight it would seem that the production of the original probate or letters of administration and the deposit of a copy, with the payment of the neceseary fees, are the only acts required to entitle the applicant to have the seal of the court applied to affixed by the registrar to the Probate or Letters of Administration. But this act of the registrar can only be done subject to the direction of the judge, which of course cannot be given until all necessary facts are made known. I have suggested, as a safe practice to be adopted, to require the applicant to petition the court, and that notice be given to the Surrogate Clerk and his certificate obtained, as in ordinary cases. An affidavit of the value, and an inventory of the personal property in Ontario, and a verified copy of the Probate or Letters of Administration should be filed. In an administration case, in the absence of the certificate mentioned in the sub-section 2 of sub-section 1 of Act, security shall be taken in the same way as in other cases of administration. The substance of the order of the judge should be endorsed on the original probate or letters of administration and authenticated by the registrar under the seal of the court. The fees to be charged will be the same as in other cases under the tariff, and the probate or letters of administration, bonds and judge's order are to be copied at length in the proper registers.

In Schedule E hereto I have set out the statistical returns of all business done in the Surrogate Court during the year 1895.

County Attorneys and Clerks of the Peace.

These officers are performing their duties in the most satisfactory manner Their fees being all subject to audit; my chief aim has been in this regard to secure, so far as possible, uniformity of practice in the various boards. During the past year I have heard less than formerly on the subject of differences in this respect. I have no doubt greater uniformity is being observed in their decisions upon questions of expenditure, in consequence of the discussion that has taken place on the subject during the past few years.

General Remarks.

I have again this year experienced some trouble in getting their annual returns from some of the officers. It must be understood that I cannot compile the schedules to my report until all the returns have been received. I shall be obliged next year to report specially any officer who is in default in this regard.

I have during the year required new securities to be given by several officers where from the death, removal or insolvency of the sureties, or other reasons, the existing securities had become unsatisfactory.

By an Order in Council, dated the 5th April, 1895, pursuant to section 141, Judicature Act, authority was conferred on me to inspect the offices of police magistrates, stipendary magistrates, justices of the peace and constables, and to hold inquiries into the conduct of any of the said officers in connection with their official duties and acts. Under this order I have made several inquiries in regard to the offices of police and other magistrates. And since the beginning of the present year, by Order in Council dated 11th March, the offices held by Deputy Clerks of the Crown, which were not before covered by my commission, have been placed under my inspection.

The effect of the Act respecting the fees of public officers, as amended by 57 Vic., cap. 9, cannot be fully seen, as it does not yet effect the receipts in all cases of previous years' earnings. But its operation can be fairly judged from the following statement of the sums paid over to the Provincial Treasurer on net incomes of the officers named for the year 1895, from which it will be seen that the amount derived from this new source of revenue largely exceeds the whole cost of inspection.

Amounts paid to Provincial Treasurer on incomes of 1895 by

Sheriffs	$1,443 53
Local Registrars, etc	4,010 42
County Attorneys, etc	211 09
Total	$5,665 04

In Schedule F I have set out a detailed statement of the fees and emoluments of the several officers for the year 1895.

I have the honor to be, Sir,

Your obedient servant,

JAS. FLEMING,
Inspector.

Osgoode Hall, Toronto,
18th March, 1896.

APPENDICES.

APPENDIX A.—Containing in tabulated form Statistics as returned

Counties or districts.	Number of Services of Writs of—						Miscellaneous Process served.	
	Summons.		Subpœna.		Order for arrest and *Ca Sa.*			
	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.
Algoma	9	6	5	9			4	6
Brant	41	17	4	98			9	1
Bruce	24	12	22	48			11	9
Carleton	201	60	41	42			72	8
Dufferin	20	6	4	2			9	
Elgin	30	23	9	15			5	
Essex	29	11	27	109		1	6	4
Frontenac	25	5	7			1	4	
Grey	35	14	14	29	1	3	12	
Haldimand	7	5	10	20	1		2	
Halton	17	6	3	13		1	10	1
Hastings	28	15	7	46	1		10	6
Huron	27	17	4	15	1	2	14	1
Kent	31	16	18	47			18	6
Lambton	17	3	10	29			9	2
Lanark	22	7	3	3			6	
Leeds and Grenville	47	17	25	11	1		16	3
Lennox and Addington	28	5	9	1	1		17	4
Lincoln	47	11	8	15	1		12	
Middlesex	62	22	47	236		2	30	4
Muskoka	11	8	6	80				
Nipissing	3	5		13				1
Norfolk	25	9	14	1				
Northumberland and Durham	24	18	10	59			26	1
Ontario	28	11	7	14			11	6
Oxford	63	31	8	16	1		20	8
Parry Sound	4	6	2	18				
Peel	25	15	7	8			9	2
Perth	24	13	20	13			13	11
Peterborough	29	18	10	4			8	8
Prescott and Russell	25	10		6		1	3	1
Prince Edward	17	8	8	3			4	1
Rainy River	11	7	19	19			7	20
Renfrew	29	19	28	63	1		2	2
Simcoe	56	20	8	35			22	2
Stormont, Dundas and Glengarry	58	26	4	1			8	3
Thunder Bay	16	21		6		2	3	14
Victoria	18	16		3			9	5
Waterloo	27	9	6	2			11	2
Welland	22	8	10	20			4	3
Wellington	25	30	14	27			11	8
Wentworth	82	37	16		1		24	1
York	35	17	7	178			7	2
Toronto	351	107	32	2		3	86	23
Totals	1,758	747	513	1,379	10	16	564	179

by the different Sheriffs for the year ending 31st December, 1895.

Total number of Services.	Number of Estreats received.		Number of Writs of Execution.						Number of Renewals of Writs received.					
			Against both goods and lands received.		Against lands only received		Against goods only received		Against both goods and lands received.		Against lands only received		Against goods only received	
	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.
39			25	39	1	14			1	2	2	3		3
170			27	14		20								
126		3	18	18	19	38			5	2				
424			56	35		13	2	2			8	8	5	8
41			36	56	18	46	18	10						
82		3	22	33		16		1	3	3		4		
187		1	45	36		43	1	9				1		
42			20	9	3	14								
108			32	23	1	36								
45	1		16	16	8	12	8	4						
51			10	14	1	13	1							
113			31	23		30		3			2	2		3
81			45	18		25								
136			40	43		34	1	1			2	2		
70			36	18	1	45	1	1				4		
41			15	7	2	11	2		3	3	2	3	1	
120			25	23		35				1				
65			15	3		6								
94			50	38		4								
403		1	60	41		26					1	2	1	1
105			8	7		1		1						
22			8	6		5								
49			22	7	15	3								
138			40	36	4	24	4	3	2	5	2	4	2	
77			38	35										
147			35	26		16								
30			9	12		8		1						
66			17	9		9								
94			25	12	2	6								
77			19	13		8		2				1		
46			17	14		15		3	1					
41			14	12	3	14			2					
83			9	17		2								
144			24	42	11	22	13	20						
143			65	40		43								
100			24	25	2	29	3	4						
62			12	20		3		1			2	2		
51			12	14		10		4						
57			30	16		7		2						
67			18	16	1	15								
115			34	19	3	20	1							
161			79	31		57								
246		2	94	33		22								
607			443	139	1	2	2	4						
5,166	1	10	1,720	1,108	96	822	57	76	17	16	21	36	9	15

APPENDIX A.—Containing in tabulated form Statistics as returned by the

Counties or districts.	Number of Sales under Writs of Execution.				Number of cases entered under the Creditors' Relief Act.	Number of Certificates received under this Act.	Assignments to Sheriffs under R. S. O., 1887, cap. 124.
	(1) Against goods.		(2) Against lands.				
	H. C. J.	C. C.	H. C. J.	C. C.			
Algoma	1	5		2	2	1	
Brant			1	1	1		
Bruce	5	2			1		1
Carleton							
Dufferin	1	1			2	2	1
Elgin		2	1	1	3		1
Essex	1	3				10	
Frontenac	2	2					
Grey	2	1					
Haldimand	1		1	1	1	1	
Halton		2			1		2
Hastings	5			2	6	1	1
Huron	2				2	2	4
Kent	2	2	2	2	12	12	2
Lambton	2	1	1	3	3		3
Lanark	1						
Leeds and Grenville	6	1		3	8	12	8
Lennox and Addington		1			2		2
Lincoln	4	1			1		
Middlesex	1	3		1			1
Muskoka			1				2
Nipissing	1						
Norfolk	4				2		2
Northumberland and Durham	4	2	3	1	6		
Ontario	2			2	4	4	3
Oxford	3	2		1	2	7	5
Parry Sound		1					2
Peel	1		2		1		
Perth	3	2	2		7		2
Peterborough	3	1	1	1	6		2
Prescott and Russell	2	2			3	1	2
Prince Edward	2		1		1	4	
Rainy River		1			2	6	
Renfrew				4	1		1
Simcoe	3		1	3	5		
Stormont, Dundas and Glengarry	1	2		5	2		5
Thunder Bay	1	2	1		4	4	
Victoria		2					
Waterloo	1	2	1	1	5		3
Welland	4	2			6	11	
Wellington	7	2	1		3	2	3
Wentworth	2	3		2	7	8	1
York	2	1			2		
Toronto	12	2	3	1	9		
Totals	94	56	23	37	123	88	59

different Sheriffs for the year ending 31st December, 1895.—*Continued.*

Amount endorsed on Writs of Execution against Goods (not Renewals).				Amount realized by Actual Sales under Writs of Execution.			
(1) For Debt or Damages.		(2) For Solicitors' Costs taxed.		(1) Against Goods.		(2) Against Lands.	
H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
24,922 24	13,460 50	1,622 21	1,433 56	82 20	870 11	.....	36 97
25,909 81	5,518 31	1,636 79	596 23	.....	.....	.....	15 00
9,789 52	858 63	3,960 85	326 52	401 00	227 00	.....	.....
78,285 94	8,354 75	3,272 49	648 39	.....	.....	.....	.....
42,471 24	6,930 73	1,560 44	303 76	85 00	200 58	.....	.....
16,079 41	7,036 66	1,405 24	786 45	.....	203 50	25 00	10 00
36,624 35	8,044 19	1,949 61	1,682 50	487 00	1,079 90	.....	.....
128,662 47	1,661 44	1,157 71	232 37	327 48	126 00	.....	.....
30,842 92	4,969 70	1,831 84	541 07	305 06	125 95	.....	.....
9,135 77	937 91	1,161 18	14 78	421 25	110 57	3 50	50 00
4,414 90	2,758 55	733 19	393 76	.....	155 75	.....	.....
23,929 82	4,271 29	2,855 66	607 29	2,596 70	.....	.....	193 00
45,774 10	5,649 67	1,353 27	447 87	268 00	.....	.....	.....
59,113 39	8,594 06	4,030 64	870 44	2,052 55	26 00	250 00	175 00
55,775 80	3,754 72	1,782 56	564 85	.....	5 16	1,233 29	185 78
11,703 23	1,636 04	3,096 80	207 69	109 29	.....	.....	.....
22,936 96	4,278 71	2,132 65	997 25	1,387 05	283 75	.....	645 00
10,717 98	1,103 28	1,855 10	98 31	.....	35 00	.....	.....
63,704 81	3,379 68	1,542 38	228 44	666 98	25 00	.....	.....
127,239 27	9,403 98	4,195 08	1,124 87	32 97	273 65	.....	13 58
59,030 71	1,959 15	511 44	132 61	.....	.....	779 00	.....
4,076 08	1,118 06	241 88	185 89	75 00	.....	.....	.....
23,209 61	1,115 37	727 54	266 10	261 00	.....	.....	.....
99,095 64	10,112 58	2,420 59	1,354 90	2,029 41	115 83	43 75	110 00
3,543 03	6,162 96	1,140 32	391 13	214 45	.....	.....	810 00
48,307 78	6,614 70	2,316 37	584 76	164 63	1,044 10	.....	.....
3,715 51	2,131 96	556 47	147 71	98 14	19 00	.....	.....
20,788 84	2,383 22	1,933 13	196 22	154 25	.....	431 00	.....
17,321 72	2,138 36	2,268 29	265 27	409 55	205 00	1,260 00	.....
119,159 37	2,845 93	353 57	280 20	282 95	93 00	71 00	100 00
10,067 43	3,262 85	765 16	392 04	192 35	113 00	.....	.....
10,316 51	3,430 08	939 70	453 11	977 98	.....	75 00	.....
8,868 06	5,467 96	1,182 75	673 10	.....	303 00	.....	.....
18,095 63	4,152 73	866 22	418 00	.....	.....	.....	457 55
81,736 28	8,282 04	2,574 76	666 53	190 56	.....	1 00	492 00
22,794 09	5,132 21	1,023 23	568 71	235 47	89 67	.....	902 45
22,961 59	8,530 71	915 93	1,005 27	1,406 00	124 77	160 00	.....
10,990 44	3,634 60	1,164 36	406 69	.....	745 44	.....	.....
27,748 80	4,262 37	1,054 35	230 93	21 95	182 00	50 00	50 00
21,984 38	4,526 22	454 34	231 62	1,238 54	348 47	.....	.....
36,778 48	3,205 85	2,314 32	252 91	1,017 95	283 09	50 00	.....
111,868 58	7,539 73	4,204 66	523 11	1,160 08	280 39	.....	407 49
261,152 15	8,127 67	3,569 81	795 03	362 20	371 80	.....	.....
936,504 78	30,725 19	24,639 51	3,901 84	2,368 78	244 72	300 00	50 00
2,808,149 42	239,465 30	101,279 39	26,430 08	22,083 77	8,311 20	4,732 54	4,703 82

APPENDIX A.—Containing in tabulated form Statistics as returned by the

Counties or districts.	Amount received for Fines, Penalties, etc.		Amount received under Writs of *Ca. Sa.*		Amount realized under Writs of Execution Without Sale.	
	H. C. J.	C. C.	H. C. J.	C. C.	H. C. J.	C. C.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Algoma					3,600 26	560 27
Brant		160 37			758 62	436 12
Bruce		500 00			96 50	714 21
Carleton	20 00					
Dufferin					155 79	376 37
Elgin		5 00			561 56	201 00
Essex		106 50			8,441 46	1,769 85
Frontenac				170 00	547 11	209 55
Grey	25 00				310 47	676 26
Haldimand						7 92
Halton						728 00
Hastings		10 00			1,590 47	1,766 97
Huron					694 45	650 35
Kent					759 76	462 05
Lambton					51 38	583 02
Lanark		01			90 00	
Leeds and Grenville					1,661 40	537 87
Lennox and Addington					707 00	432 63
Lincoln					10,738 27	716 56
Middlesex					551 89	571 06
Muskoka						181 95
Nipissing					85 00	537 50
Norfolk						520 24
Northumberland and Durham					182 20	615 74
Ontario		45 50			25 00	442 59
Oxford					2,290 76	1,517 16
Parry Sound					62 40	670 21
Peel					413 02	1,004 61
Perth		50 00			659 42	756 24
Peterborough						312 48
Prescott and Russell						450 13
Prince Edward					200 79	343 53
Rainy River					1,339 22	373 96
Renfrew		10 00			2,334 62	1,517 71
Simcoe		2 00			487 13	1,108 20
Stormont, Dundas and Glengarry		3 00				
Thunder Bay						138 60
Victoria					512 85	95 74
Waterloo						72 87
Welland					1,247 00	300 51
Wellington					1,330 11	504 32
Wentworth					867 28	1,342 93
York		120 00			911 48	414 50
Toronto					2,090 20	1,532 09
Totals	45 00	1,011 88		170 00	46,354 87	26,153 87

different Sheriffs for the year ending 31st December, 1895.—*Concluded.*

Amount of Fees earned for the Administration of Justice payable by the Province.	Amount of Fees so earned payable by the County.	Amount of Fees otherwise earned.	Amount paid by the Province as Salary.	Total amount of Fees earned.	Total amount of Disbursements.	Net amount due to for earnings of 1894.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,007 41	.....	982 30	1,000 00	2,989 71	1,432 04	1,557 67
1,172 06	447 73	759 16	.....	2,378 95	608 78	1,770 17
1,477 56	598 93	1,155 02	.....	3,231 51	1,208 15	2,023 36
1,540 34	783 59	2,367 59	.....	4,691 52	2,114 55	2,576 97
659 74	402 72	785 53	.....	1,847 99	580 99	1,267 00
1,273 23	404 82	972 29	.....	2,650 34	1,172 49	1,477 85
1,219 38	1,191 20	463 25	.....	2,873 83	1,891 71	982 12
743 66	335 01	433 47	100 00	1,612 14	608 72	1,003 42
1,456 95	783 19	1,394 42	.....	3,634 56	1,269 32	2,365 24
1,130 08	355 50	273 89	100 00	1,859 47	469 26	1,390 21
615 84	334 50	383 59	.....	1,333 93	433 00	900 93
1,176 30	711 24	1,249 44	.....	3,136 98	577 93	2,559 05
830 41	518 89	1,401 74	.....	2,751 04	1,722 81	1,028 23
1,160 00	647 50	1,230 42	.....	3,037 92	1,187 57	1,850 35
1,165 00	426 18	923 95	.....	2,515 13	999 32	1,515 81
643 76	380 93	428 46	.....	1,453 15	459 76	993 39
876 95	561 39	1,631 05	.....	3,069 39	1,055 38	2,014 01
419 42	306 12	543 58	.....	1,269 12	180 00	1,089 12
778 75	502 00	1,274 87	.....	2,555 62	427 83	2,127 79
2,137 79	1,385 89	871 68	.....	4,395 36	1,833 68	2,561 68
1,301 25	.....	.....	500 00	1,801 25	643 09	1,158 16
607 07	.....	.....	415 00	1,022 07	404 80	617 27
735 00	576 00	589 00	....	1,900 00	412 21	1,487 79
1,610 30	704 40	1,103 15	.....	3,417 85	2,251 53	1,166 32
583 15	546 75	870 88	.....	2,000 78	508 44	1,492 34
1,420 60	427 53	1,103 27	.....	2,951 40	1,087 01	1,864 39
987 73	....	1,154 72	500 00	2,642 45	1,507 52	1,134 93
869 45	364 71	717 86	.....	1,952 02	1,047 16	904 86
1,262 60	431 65	1,068 19	.....	2,762 44	1,188 60	1,573 84
724 13	562 22	629 30	.....	1,915 65	694 25	1,221 40
330 64	383 59	775 23	500 00	1,989 46	713 06	1,276 40
479 12	418 43	618 51	200 00	1,716 06	1,034 93	681 13
927 22	.....	472 01	1,000 00	2,399 23	823 07	1,576 16
867 88	601 93	1,185 13	.....	2,654 94	718 93	1,936 01
1,443 22	642 13	1,833 81	.. ..	3,919 16	2,273 41	1,645 75
707 63	903 84	1,016 29	....	2,627 76	1,024 84	1,602 92
1,132 51	.....	408 10	1,000 00	2,540 61	602 98	1,937 63
835 67	560 41	661 56	.....	2,057 64	367 50	1,690 14
1,276 87	415 51	565 12	100 00	2,357 50	907 93	1,449 57
836 50	693 81	705 88	.....	2,236 19	610 00	1,626 19
1,239 70	366 18	1,236 71	.....	2,842 59	1,427 96	1,414 63
2,260 35	448 30	1,848 26	.....	4,556 91	2,545 51	2,011 40
4,284 90	624 88	1,644 56	.....	6,554 34	2,720 06	3,834 28
4,535 12	1,116 65	4,841 59	.....	10,493 36	5,810 01	4,683 35
52,743 24	21,866 25	44,574 83	5,415 00	124,599 32	51,558 09	73,041 23

APPENDIX B.—Being a Return of Business transacted by Local Masters throughout the

Counties or districts.	Number of Orders made for the following purposes.					Number of examinations taken as special examiners or otherwise before trial.
	(For the administration of estates. (1)	For the partition or sale of property. (2)	Relation to infants under R. S. O., chap. 40, s. 76. (Examination only.) (3)	Under the Winding-up Acts. (4)	Other orders made in chambers. (5)	(6)
Algoma						
Brant	1					
Bruce						
Carleton	2	2			54	15
Dufferin		1			18	1
Elgin	3	3			1	19
Essex					2	31
Frontenac	2					13
Grey		3	3		54	5
Haldimand		1			1	1
Halton						
Hastings	4	4			42	21
Huron	4	3	1			3
Kent	3	1			19	12
Lambton	3	1			3	
Lanark	1				2	
Leeds and Grenville	1	2			29	1
Lennox and Addington	3	5			16	
Lincoln	1	3			3	7
Middlesex	1	2				30
Muskoka and Parry Sound						
Nipissing						
Norfolk		2			1	
Northumberland and Durham	2	2			20	
Ontario	2	1			13	1
Oxford		1				13
Peel	1				21	8
Perth	1				1	12
Peterborough					41	
Prescott and Russell						
Prince Edward	2	1			2	6
Renfrew		7				1
Simcoe	1	3			24	12
Stormont, Dundas and Glengarry		2			105	
Thunder Bay						
Victoria		1			50	
Waterloo	2			1	3	
Welland	1	1				
Wellington	3				64	
Wentworth		2			33	1
Totals	44	54	4	1	622	13

Province of Ontario, other than Toronto, during the year ending 31st December, 1895.

Number of Judgments or Orders brought into the Master's Office for taking the following accounts, etc.

(Administration of estates. (7)	Executors, trustees or committees' accounts and compensation. (8)	Foreclosure of mortgage or bond. (9)	Redemption of mortgage or bond. (10)	Sale under mortgage or agreement. (11)	Account on any charge or lien on land, other than Mechanics' Lien Act. (12)	Account under Mechanics' Lien Act. (13)	Specific performance. (14)	Partnership accounts. (15)	Alimony. (16)	Partition or sale. (17)	Damages for breach of contract or covenant. (18)
1		1									
		1									
			1								
4		17		14		5		1		3	1
1		1						1			
1				4				2			
1		2	1		2	2	1			1	
2	2	14		2						1	
3	1	1		1						3	
2	2			4	1						
1		1		2						1	
7		5		4					1	4	
4	1			2				2			
2	1			3				1		2	
						2			1	3	
2		8		4							
1	1	3			1						
4		1		1				1		5	
5			3		1					3	
1			4		1			1		3	
	1										
				2							
1		6		2						1	
2		9		1	1	1				1	
3		1	1		1				1		
5	1	1		1	2			1			1
1		1		5							
5	2	5		4							
		1									
		3		2							
4		6			2			2		3	
		12	4	1		1				2	
					1						
1		2			1	1	1			2	
2				8	1						
					1	4		1	1		1
4	1	7				2		1			
4		9		5		5		1	1	2	
74	13	118	10	72	15	24	2	15	5	40	3

APPENDIX B.—Being a Return of Business transacted by Local

Counties or districts.	Number of Judgments, or Orders, etc.—*Concluded.*						
	(Work and labor done. (19)	Money received, paid, advanced or lent. (20)	Goods sold and delivered. (21)	Promissory notes, bills of exchange. (22)	Bonds, life and fire insurance. (23)	Infants' estates. (24)	Quieting title matters. (25)
Algoma							
Brant							
Bruce							
Carleton		1				1	
Dufferin							
Elgin							
Essex						2	
Frontenac							1
Grey	2					1	
Haldimand							
Halton							
Hastings							1
Huron						1	
Kent							
Lambton							
Lanark							
Leeds and Grenville							
Lennox and Addington							
Lincoln	1						
Middlesex							
Muskoka and Parry Sound							
Nipissing							
Norfolk							
Northumberland and Durham							1
Ontario							
Oxford							1
Peel							1
Perth				1			
Peterborough							
Prescott and Russell							
Prince Edward							
Renfrew							
Simcoe			2				3
Stormont, Dundas and Glengarry							1
Thunder Bay							
Victoria							
Waterloo							
Welland							
Wellington							
Wentworth							
Totals	3	1	2	1	.....	5	9

Masters throughout the Province of Ontario, etc.—*Concluded.*

Lunacy. (26)	Miscellaneous. (27)	Number of advertisements of sale issued. (28)	Number of reports issued. (29)	Number of references pending at date of return. (30)	Number of bills of costs taxed by Master. (31)	Amount realized by sales held under the direction of Master.	Amount of costs of reference, etc., taxed by Master or under his direction.	Amount of commission allowed in administration and partition matters.	Amount of fees earned by Local Masters.
						$ c.	$ c.	$ c.	$ c.
.....	.....	1	1	2	1	....	30 56	.....	41 65
.....	....	1	6	1	6	....	313 64	....	75 24
....	1	2	8	3	6	955 00	535 38	115 00	223 00
1	2	23	44	19	37	93,114 41	3,889 26	1,159 72	1,590 72
.....	.....	1	4	2	7	2,287 00	637 07	110 45	157 60
.. ..	3	5	20	16	35	4,250 00	4,161 50	1,219 25	1,187 96
....	....	2	10	7	3	5,514 37	239 88	321 30	408 00
1	1	1	24	6	26	....	2,476 51	421 00	598 45
....	.....	9	18	6	31	16,041 00	1,111 89	704 20	721 13
2	.....	2	10	5	11	3,920 00	940 35	....	162 56
1	.....	3	5	....	5	4,300 00	....	....	136 76
.....	11	7	30	15	30	18,260 00	2,076 69	1,263 58	1,386 30
.....	.....	10	15	10	16	15,209 00	928 28	639 05	223 40
... .	.....	4	6	2	30	3,000 00	516 00	210 00	586 00
....	.....	3	3	1	.....	50 00	.....	.....	49 80
.....	.....	7	8	10	9	3,630 00	834 60	....	182 20
.....	.....	4	12	6	11	4,130 00	827 10	467 62	247 38
.....	7	9	18	8	18	16,740 00	1,413 08	999 27	744 26
.....	1	2	7	8	5	1,600 00	249 80	153 00	1,288 96
.....	.....	5	14	11	20	16,610 00	8,333 75	633 90	1,138 88
.....	.....	.....	.....	.....	.....	.....	.....	....	....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	4	6	2	4	5,875 00	382 99	402 54	94 59
.....	.....	4	15	10	15	25,945 00	1,254 58	133 50	542 94
2	.....	3	12	3	13	2,985 00	1,402 64	....	420 50
. .....	.....	3	11	3	5	1,407 00	1,013 77	393 00	828 11
.....	.....	2	10	2	15	9,547 68	1,225 20	186 00	440 44
.....	2	7	15	12	33	15,887 65	5,566 32	318 92	1,523 03
.....	.....	8	13	2	4	7,850 00	346 93	....	281 55
.....	.....	1	3	.. .. ..	2	1,205 00	152 18	135 25	35 70
.....	.....	3	12	3	10	4,555 00	927 07	208 50	406 85
.....	1	2	2	1	1	610 00	80 60	105 50	57 82
.....	.....	7	8	14	13	2,225 00	2,113 96	337 50	436 00
.....	.....	8	30	15	40	14,839 00	2,595 42	643 64	686 20
.....	.....	.....	.....	.....	.....	2,200 00	141 20	....	21 00
.....	.....	3	9	9	11	4,050 00	5,401 86	517 20	284 20
.....	.....	6	14	6	11	25,683 29	.....	414 00	303 80
.....	.....	2	6	5	6	1,760 00	282 66	.....	98 62
....	.....	3	21	6	20	15,830 00	2,103 55	697 50	1,029 43
.....	4	10	34	20	44	66,965 00	4,909 35	2,508 32	1,006 25
7	33	177	484	251	554	419,040 40	59,385 62	15,448 71	19,641 28

APPENDIX C.—Being a return of all business transacted by Local Registrars, Deputy during the year ending

Counties or districts.	Number of Writs issued in the		Number of orders for arrest issued.		Number of Actions entered in Procedure Book.		Number of *Lis pendens* issued.		Number of *Præcipe* orders issued.	
	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.
Algoma	21	10	.....	...	16	9	.....	2	2	8
Brant	72	36	.....	.....	62	29	5	1	38	18
Bruce	42	22	.....	.....	36	15	5	8	9	4
Carleton	225	112	.....	.....	174	94	5	4	99	54
Dufferin	41	20	.....	.....	33	16	8	5	14	5
Elgin	78	39	1	.....	64	32	6	2	19	15
Essex	96	50	.....	.....	82	52	7	3	33	21
Frontenac	107	55	.....	.....	72	32	4	6	27	20
Grey	63	31	2	.....	53	25	7	3	19	7
Haldimand	14	8	.....	.....	14	6	1	.....	3	2
Halton	15	8	.....	.....	15	7	1	1	5	5
Hastings	99	53	.....	.. ..	88	.. .	11	5	69	29
Huron	81	40	1	....	60	25	16	.....	38	12
Kent	70	34	.....	.....	56	35	9	5	18	27
Lambton	70	36	.....	... ..	54	29	7	3	22	4
Lanark	66	33	.....	.....	46	25	8	4	7	7
Leeds and Grenville	60	29	.....	.....	48	26	5	3	21	9
Lennox and Addington	51	25	1	.....	43	28	2	2	27	13
Lincoln	57	28	.....	.....	44	28	4	1	17	7
Middlesex	241	120	.....	.....	181	99	16	8	91	39
Muskoka	5	2	.....	.....	4	2	.....	.....	2	.....
Nipissing	9	4	.....	....	4	3	1	.....	5	1
Norfolk	27	14	.....	.....	19	13	2	.....	9	2
Northumberland and Durham	64	32	.....	.....	24	13	7	.....	21	15
Ontario	53	27	.....	.....	41	17	3	3	13	2
Oxford	105	53	2	.....	80	52	12	3	46	15
Parry Sound	4	2	.....	.....	5	2	1	.....	.....	.....
Peel	29	13	.....	.....	19	13	3	1	26	6
Perth	82	42	.....	.....	63	29	9	4	32	11
Peterborough	66	33	.....	.....	51	19	5	4	22	4
Prescott and Russell	16	7	.....	.....	12	8	2	1	5	2
Prince Edward	23	14	.....	.....	19	12	.....	3	1	6
Rainy River	7	3	.....	.....	6	3	1	1	5	3
Renfrew	38	18	.....	.....	26	13	1	1	9	2
Simcoe	78	38	.....	.....	68	28	6	1	28	7
Stormont, Dundas and Glengarry	83	41	.....	.....	62	33	1	3	28	17
Thunder Bay	13	5	.....	.....	13	5	2	.....	11	4
Victoria	27	13	.....	.....	21	13	.....	.....	14	4
Waterloo	55	28	.....	.....	37	20	2	.....	14	8
Welland	33	16	.....	.....	29	13	5	6	16	7
Wellington	71	35	.....	.. ...	51	22	12	5	18	10
Wentworth	275	138	.....	.....	220	138	21	9	119	85
York	1,552	776	.....	.....	908	442	90	53	684	361
Totals	4,284	2,143	7	.....	3,023	2,525	313	164	1,706	878

Registrars and Deputy Clerks of the Crown throughout the Province of Ontario, 31st December, 1895.—*Continued.*

Number of Orders issued and signed by Local Judges.		Number of Examination of parties.		Number of Actions entered for trial.				Number of Judgments entered without trial.		Total amount of such Judgments without costs.	
				(1) By Jury.		(2) Without Jury.					
Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.
										$ c.	$ c.
11	8	3	3	.....	2	4	5	2	.....	240 32	.....
28	14	21	9	10	6	16	5	15	6	10,439 87	3,515 41
18	14	15	5	7	3	2	1	5	4	8,549 45	4,812 28
89	42	51	15	19	.....	9	28	83	55	72,182 11	71,936 52
2	1	17	4	12	2	9	2	2	2	1,047 58	525 82
25	9	17	10	.....	2	11	3	17	5	12,420 05	5,107 64
22	63	27	26	9	2	22	21	25	11	13,997 16	9,069 62
50	32	6	4	15	8	5	7	33	12	41,272 94	16,737 83
11	5	19	7	19	.....	.....	16	14	12	13,853 95	4,228 93
5	4	5	3	6	2	4	.....	4	3	2,903 42	7,042 16
12	6	3	1	2	1	3	2	11	5	7,737 75	3,575 11
35	12	43	....	32	6	20	9	21	23	10,331 25	10,437 47
26	3	16	3	12	3	.....	13	16	16	13,211 04	.....
28	.....	35	33	23	.....	16	11	11	8	7,334 81	17,645 20
10	9	20	17	4	1	8	3	16	17	22,310 59	6,554 42
30	12	9	1	3	.....	2	4	21	14	13,556 00	9,903 00
22	11	23	10	6	3	6	5	14	7	7,793 30	2,780 41
13	7	20	7	7	2	3	3	13	14	5,080 63	2,174 61
16	12	10	.....	2	.....	2	10	20	3	16,418 13	2,164 49
110	32	50	.....	26	10	11	37	65	33	109,278 42	3,237 28
.....	.....	1	....	.....	.....	2	3	5	6	1,538 63	.....
....	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....
6	9	1	4	7	2	1	2	7	4	3,317 26	3,087 98
13	6	11	2	13	2	7	.....	17	15	27,945 31	11,381 52
10	9	8	2	3	2	2	1	21	10	15,561 62	14,260 00
42	16	41	13	15	.....	3	8	25	9	35,233 16	12,608 42
.....	....	4	.....	.....	1	1	....	1	.....	251 73	....
13	9	17	5	2	2	8	4	5	3	1,883 70	2,555 73
47	26	16	8	9	6	20	10	16	10	13,394 73	4,405 12
.....	....	11	4	3	2	6	1	28	15	66,955 21	111,893 50
5	5	4	2	.....	.....	2	1	5	3	3,458 08	4,169 87
12	7	10	.....	2	2	.....	5	10	4	4,961 94	2,309 89
12	9	3	6	.....	2	.....	1	1	2	1,219 48	981 34
32	12	10	.....	3	.....	3	1	10	5	.....	.....
.....	.....	31	.....	27	.....	7	11	10	10	14,399 20	1,521 82
19	14	3	4	8	6	4	4	31	17	19,167 70	16,990 93
25	14	6	11	2	1	6	1	2	1	.....	1,000 00
4	2	8	3	2	1	8	.....	5	7	.....	6,819 95
12	5	16	8	3	5	5	4	18	9	9,726 57	9,750 33
11	6	9	4	7	1	5	4	6	7	2,285 94	1,505 01
5	.....	7	.....	8	1	.....	3	21	14	24,609 84	2,404 78
84	79	30	25	39	19	24	17	76	47	131,048 01	55,740 16
.....	.....	.....	.....	105	68	198	137	.....	.....	.....	.....
915	526	658	270	367	108	465	403	728	448	766,916 88	444,834 55

APPENDIX C.—Being a return of all business transacted by Local Registrars, Deputy during the year ending

Counties or districts.	Total amount of costs taxed thereunder.		Total amount of disbursements allowed thereunder.		Number of Judgments entered after trial.	
	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.
	$ c.	$ c.	$ c.	$ c.		
Algoma	76 87	.....	18 56	.....	1	2
Brant	474 88	290 52	212 73	106 07	10	3
Bruce	112 22	103 18	27 96	24 22	5	2
Carleton	3,098 63	1,385 87	1,270 32	375 12	19	13
Dufferin	16 10	91 95	4 26	13 57	4	1
Elgin	471 31	95 70	129 71	26 62	6	5
Essex	1,320 49	278 40	187 44	110 62	16	8
Frontenac	669 95	94 08	198 67	16 19	12	8
Grey	453 49	296 67	150 16	75 65	8	4
Haldimand	96 08	90 91	32 11	25 57	5	1
Halton	106 99	63 96	44 93	15 13	.....	....
Hastings	460 45	254 74	52 18	76 03	13	7
Huron	379 67	.....	279 54	.....	12	4
Kent	201 90	402 25	77 97	156 12	11	6
Lambton	343 23	670 17	80 80	193 05	10	2
Lanark	486 00	477 00	159 00	191 00	4	3
Leeds and Grenville	557 66	55 63	178 56	18 33	5	3
Lennox and Addington	182 49	107 46	52 15	33 37	5	4
Lincoln	389 62	94 31	108 74	28 61	4	1
Middlesex	2,566 48	877 00	405 32	406 06	23	13
Muskoka	143 60	.....	35 22	.....	.....	1
Nipissing	.....	.....	.....	.....	.....	.....
Norfolk	209 48	77 01	56 40	17 19	3	3
Northumberland and Durham	450 33	426 19	110 38	113 71	2	2
Ontario	357 11	240 35	119 23	86 26	3	.....
Oxford	610 60	290 15	172 13	83 48	12	10
Parry Sound	38 18	.....	.....	.....	.....	.....
Peel	99 59	226 90	29 03	11 96	7	4
Perth	297 41	130 13	84 91	39 33	15	6
Peterborough	967 56	417 26	126 18	117 42	5	.....
Prescott and Russell	129 37	64 55	42 81	19 40	2	1
Prince Edward	257 08	143 00	81 88	43 85	1	4
Rainy River	42 69	52 07	15 79	15 17	1	.....
Renfrew	393 92	188 10	212 66	58 16	8	3
Simcoe	442 26	152 64	131 31	44 59	7	3
Stormont, Dundas and Glengarry	1,537 10	3,963 60	463 27	1,214 11	6	5
Thunder Bay	.....	18 73	.....	4 13	7	1
Victoria	28 23	204 84	4 63	70 80	2	1
Waterloo	408 73	103 84	128 96	48 60	2	5
Welland	80 59	60 35	20 52	20 86	3	2
Wellington	555 55	112 96	199 86	22 98	6	1
Wentworth	2,091 61	2,455 20	545 91	844 79	32	12
York	.....	.....	.....	.....	.....	.. ..
Totals	21,605 50	15,057 67	6,252 19	4,768 12	292	152

Registrars and Deputy Clerks of the Crown throughout the Province of Ontario, 31st December, 1895.—*Continued.*

Total amount of such Judgments without costs.		Amount of Costs taxed thereunder.		Total amount of Disbursements allowed thereunder.		Number of Judgments.					
Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.	Over $10,000.	$10,000 and above $5,000.	$5,000 and above $2,000.	$2,000 and above $1,000.	$1,000 and above $500.	$500 and under.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.						
.....	.....	218 17	367 10	157 68	179 24	..	....	....	....	....	3
3,232 30	9,806 49	1,193 74	151 33	494 20	69 83	..	1	1	3	12	17
2,722 50	.....	1,333 86	122 54	689 72	61 32	..	1	2	1	3	2
5,996 38	37,936 52	4,366 36	1,385 87	2,029 40	375 12	1	2	14	21	36	96
9,741 87	3,000 00	224 25	386 20	165 93	125 19	..	1	1	2	1	4
1,908 04	6,739 84	1,428 44	686 20	411 59	191 54	..	....	5	1	13	15
13,319 42	25	1,423 64	303 75	918 81	386 75	..	....	2	9	17	15
25,079 70	3,261 94	1,096 04	1,012 65	570 68	474 33	2	1	7	6	7	9
2,188 43	1,300 00	1,133 22	431 83	477 29	191 06	..	....	2	4	5	27
2,557 73	1 00	537 34	209 76	231 16	106 26	..	....	2	2	1	8
.....	.....	.....	.....	.....	.....	..	....	2	2	4	....
15,388 27	2,944 56	2,646 98	934 32	1,517 73	188 28	1	....	5	5	7	29
2,216 46	4,382 24	325 44	632 28	72 83	405 65	..	1	....	6	10	16
9,247 50	12,407 50	411 97	380 70	741 51	97 10	..	2	2	4	12	7
2,238 61	.....	1,130 51	258 82	493 06	104 65	.	1	5	8	11	20
600 00	.....	721 00	371 00	563 00	209 00	..	....	3	11	10	....
1,296 29	.....	1,365 82	686 75	812 02	425 11	..	....	....	6	11	4
3,178 49	301 56	1,000 25	358 11	381 62	157 14	..	....	1	4	4	27
448 60	2,760 84	217 17	.....	165 57	.....	..	1	2	4	8	5
16,647 51	3,740 75	4,333 69	1,348 24	888 11	382 94	2	6	7	13	36	51
.....	.....	.....	.....	.....	.....	..	....	....	....	2	2
.....	.....	.....	.....	.....	.....	..	....	....	....	....	....
77 00	450 00	.....	123 80	.....	47 49	..	....	1	....	3	13
.....	.....	329 86	502 04	184 47	297 27	..	1	6	7	4	8
2,904 14	.....	166 34	.....	328 30	.....	..	1	3	5	10	15
1,335 12	5,260 47	1,483 47	2,127 78	787 57	1,101 33	..	2	7	5	9	27
.....	.....	.....	.....	.....	.....	..	....	....	....	....	1
3,730 04	6,656 90	396 94	246 23	212 73	79 86	..	1	2	....	3	7
5,700 00	500 00	1,585 82	184 00	1,036 17	151 24	..	....	4	3	4	36
849 00	.....	504 94	.....	153 62	.....	2	....	2	6	10	10
643 39	.....	220 55	.....	42 69	.....	..	....	1	1	3	5
.....	1,253 85	.....	50 25	.....	.....	..	....	....	1	5	8
50 00	.....	534 28	.....	287 12	.....	..	....	....	1	1	2
313 34	.....	1,524 04	263 17	280 00	139 42	1	....	2	2	3	13
3,098 80	.....	1,316 00	.....	903 20	.....	..	....	1	10	9	9
.....	516 50	518 82	944 80	228 60	267 95	..	....	7	5	12	18
6,233 27	417 00	797 59	519 65	391 16	147 64	.	....	2	1	1	7
....	218 75	646 32	617 47	311 00	245 00	..	.. .	....	....	....	3
1,750 00	1,585 50	286 62	795 81	195 05	206 50	..	....	1	4	2	7
5,538 93	1,681 61	301 79	50 00	119 44	35 88	..	1	....	2	3	12
2,673 35	100 00	876 58	162 05	339 63	62 40	..	1	3	4	11	6
14,680 07	863 00	5,972 22	742 13	2,323 58	412 95	3	3	16	22	28	69
..... .	.....	.....	.....	.....	....	..	....	....	....	....	....
171,583 95	108,087 07	42,569 57	17,356 63	19,906 24	7,325 44	12	27	121	191	331	633

APPENDIX C.—Being a return of all business transacted by Local Registrars, Deputy during the year ending

Counties and districts.	Number of Executions issued against goods and lands.		Amount of Money paid into Court with Defence.		Number of Writs *Ca. Sa.* issued.	Number of days of sitting of Judge with Jury.		Number of days of sitting of Judge without Jury.	
	Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.		Q. B. and C. P. Divs.	Chy. Divs.	Q. B. and C. P. Divs.	Chy. Divs.
			$ c.	$ c.					
Algoma	2	2				7			
Brant	15	6				7		3	
Bruce	14	8				10		2	
Carleton	79	33	577 23	699 60		15		7	
Dufferin	5	5				10		6	
Elgin	15	5			1	12		4	
Essex	19	15				7		9	11
Frontenac	17	5				8			4
Grey	10	7				10			7
Haldimand	4	2				7			
Halton	3	1				1		3	
Hastings	11	11				10		8	
Huron	8	4				10			4
Kent	20	18				8		5	6
Lambton	7	7				5		4	
Lanark	10	7		260 00		9			
Leeds and Grenville	11	3				9		2	
Lennox and Addington	22	11	594 00			5			
Lincoln	20	4	33 93			5	3		
Middlesex	57	33		120 00		20			8
Muskoka	2					5			
Nipissing									
Norfolk	2	2				4		3	
Northumberland and Durham	14	7				11		4	
Ontario	21	11	965 00				4		2
Oxford	23	10				10			7
Parry Sound	1		28 00			2			
Peel	10	10				3		5	
Perth	20	10				8			8
Peterborough	22	14	1,463 24	320 00		7		2	
Prescott and Russell	7	1	120 30			2			
Prince Edward	4	7		500 00				2	
Rainy River	2	2					2	1	
Renfrew	4	4			1	2		2	
Simcoe	28	8				9			5
Stormont, Dundas and Glengarry	22	6				6		6	
Thunder Bay	18	6				3		5	
Victoria	2	4				9		4	
Waterloo	15	5	100 00			8			
Welland	8	5				7			
Wellington	28	8				7			2
Wentworth	62	18	2,036 12	515 80		33			9
York					1				
Totals	664	315	5,917 82	2,415 40	3	311	9	87	73

Registrars and Deputy Clerks of the Crown throughout the Province of Ontario, 31st December, 1895.—*Concluded.*

Number of Estreats ordered to be issued.	Number of Estreats issued.	Amount of Jury fees paid County Treasurer.	Amount of Fees collected in Law stamps by Deputy Clerks and Local Registrars.	Amount of Fees collected in Law Stamps by Deputy Registrars.	Amount of Salary paid Deputy Clerks of the Crown.	Amount of Salary paid Local Registrars as Deputy Registrars in Chancery.	Amount of Fees earned by Deputy Clerks or Local Registrars and payable in cash.	Amount of Fees earned by Deputy Registrars.	Total amount of Salaries paid and Fees earned by Deputy Clerks and Deputy Registrars.
		$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
.....	.....	6 00	102 40	.....	50 00	100 00	110 30	.....	260 30
.....	.....	48 00	456 30	.....	450 00	225 00	139 00	.....	814 00
.....	.....	27 60	370 70	.....	450 00	.....	142 00	.....	592 00
.....	.....	54 00	1,636 45	.....	450 00	.....	1,012 30	.....	1,462 30
.....	.....	51 00	261 80	.....	450 00	225 00	236 35	.....	911 35
.....	.....	6 00	479 10	.....	450 00	225 00	257 34	.....	932 34
.....	.....	30 00	758 90	53 00	450 00	.....	1,021 85	344 05	1,815 90
.....	.....	36 00	697 40	.....	450 00	225 00	205 50	.....	880 50
.....	.....	57 00	497 10	.....	500 00	250 00	173 20	.....	923 20
.....	.....	21 00	135 00	.....	400 00	200 00	94 90	.....	694 90
.....	.....	9 00	182 10	.....	400 00	200 00	52 85	.....	652 85
.....	.....	102 00	526 70	321 60	450 00	.....	746 46	321 60	1,518 06
.....	.....	42 00	464 40	83 50	500 00	.....	274 60	83 50	858 10
.....	.....	45 00	276 25	316 00	450 00	.....	210 00	316 00	976 00
.....	.....	15 00	434 60	.....	450 00	225 00	379 56	.....	1,054 56
.....	.....	12 00	417 70	.....	450 00	225 00	140 00	.....	815 00
.....	.....	27 00	434 30	.....	500 00	.....	373 25	.....	873 25
.....	.....	27 00	390 60	.....	400 00	200 00	376 75	.....	976 75
1	1	6 00	262 40	20 70	450 00	.....	211 89	152 39	814 28
.....	.....	108 00	1,426 60	117 00	500 00	.....	660 50	661 16	1,821 66
.....	.....	.....	46 55	.....	400 00	200 00	20 00	.....	620 00
.....	.....	.....	22 70	.....	98 79	.....	.....	.....	98 79
.....	.....	27 00	188 00	.....	450 00	225 00	237 80	.....	912 80
.....	.....	46 50	409 70	.....	500 00	250 00	301 20	.....	1,051 20
.....	.....	15 00	294 40	.....	450 00	225 00	42 00	.....	717 00
.....	.....	45 00	579 40	26 60	450 00	.....	615 80	376 94	1,442 74
.....	.....	.....	22 30	.....	400 00	200 00	59 45	.....	659 45
.....	.....	12 00	251 00	.....	400 00	200 00	165 30	.....	765 30
.....	.....	45 00	636 10	.....	450 00	225 00	802 60	.....	1,477 60
.....	.....	15 00	456 70	.....	450 00	225 00	172 29	.....	847 29
.....	.....	3 00	105 80	.....	450 00	225 00	92 81	.....	767 81
.....	.....	12 00	240 20	.....	400 00	200 00	.....	.....	600 00
.....	.....	.....	97 50	.....	700 00	.....	107 50	.....	807 50
.....	.....	9 00	237 85	.....	400 00	200 00	78 80	.....	678 80
.....	.....	66 00	359 40	23 40	500 00	.....	285 25	262 09	1,047 34
.....	.....	42 00	615 80	.....	500 00	250 00	172 85	.....	922 85
.....	.....	12 00	885 40	.....	400 00	200 00	325 75	.....	925 75
.....	.....	42 00	159 00	.....	450 00	225 00	147 35	.....	822 35
.....	.....	26 50	349 00	.....	850 00	225 00	190 40	.....	1,265 40
.....	.....	24 00	292 30	.....	400 00	200 00	178 50	.....	778 50
.....	.....	27 00	458 30	.....	500 00	.....	247 38	.....	747 38
.....	.....	174 00	1,490 45	820 42	500 00	.....	438 92	820 42	1,759 34
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	1	1,372 00	18,408 65	1,782 22	8,748 79	5,775 00	11,500 55	3,338 15	39,362 49

APPENDIX D.—Being a return of business transacted by County Court Clerks

Counties or Districts.	Number of Writs of summons issued.	Number of Orders for Arrest issued.	Number of Actions entered in Procedure Book.	Number of *Lis pendens* issued.	Number of *Præcipe* orders issued.	Number of Orders issued and signed by Local Judge.	Number of Examinations of parties.	Number of Actions entered for Trial.	
								(*a*) By Jury.	(*b*) Without Jury.
Algoma	53	.....	42	.....	4	51	2	1	1
Brant	46	.....	41	.....	11	37	12	4	1
Bruce	26	.....	17	1	6	25	1	1	1
Carleton	104	.....	88	.....	28	29	17	.....	....
Dufferin	13	.....	10	.....	1	4	1	1	....
Elgin	30	1	40	.....	18	16	12	4	6
Essex	55	.....	45	.....	10	16	8	8	5
Frontenac	30	.....	21	1	9	19	1	1	....
Grey	31	1	24	.....	9	4	11	6	4
Haldimand	10	.....	10	.....	2	4	2	3	1
Halton	7	.....	8	.....	4	4	.....	1	2
Hastings	61	.....	52	1	25	54	16	16	2
Huron	36	2	31	.....	12	22	7	3	....
Kent	47	.....	.....	.....	13	11	16	6	7
Lambton	33	.....	28	.....	9	9	11	3	3
Lanark	34	.....	22	.....	4	10	.....	1	....
Leeds and Grenville	32	.....	22	.....	3	13	5	5	....
Lennox and Addington	12	.....	8	.....	3	9	3	2	1
Lincoln	25	.....	17	.....	5	14	6	.....	2
Manitoulin	1	.....	1	.....	.....	.....	.....	.....	2
Middlesex	157	.....	121	1	20	77	20	10	4
Muskoka	5	.....	4	.....	1	2	1	.....	....
Nipissing	10	.....	9	.....	.....	4	1	1	....
Norfolk	9	.....	7	.....	4	4	1	2	....
Northumberland and Durham	38	.....	15	.....	17	25	7	7	....
Ontario	33	.....	27	.....	2	16	5	.....	3
Oxford	53	.....	38	.....	15	38	9	9	4
Parry Sound	6	.....	5	.....	.....	1	.....	.....	1
Peel	25	.....	18	.....	17	25	5	6	6
Perth	39	.....	24	.....	10	19	9	4	3
Peterborough	45	.....	37	1	9	2	8	4	2
Prescott and Russell	11	.....	8	.....	6	4	6	....	....
Prince Edward	20	.....	15	1	7	9	1	.....	....
Rainy River	17	.....	15	1	4	39	10	1	2
Renfrew	28	.....	16	1	3	16	1	1	2
Simcoe	46	.....	.....	.....	2	.....	10	3	3
Stormont, Dundas and Glengarry	64	.....	43	.....	3	18	2	2	1
Thunder Bay	41	1	35	.....	13	62	6	3	3
Victoria	18	.....	18	.....	12	.....	6	5	1
Waterloo	44	.....	27	....	11	13	3	.....	....
Welland	18	1	13	.....	5	9	1	.....	....
Wellington	60	.....	41	.....	12	28	15	9	2
Wentworth	156	1	131	1	44	56	15	29	6
York	696	5	538	10	169	491	45	42	65
Totals	2,325	12	1,732	19	562	1,309	318	204	146

throughout the Province of Ontario during the year ending 31st December, 1895.

Number of Judgments entered without trial.	(a) Total amount of such Judgments without costs.	(b) Total amount of Costs taxed thereunder.	(c) Total amount of Disbursements allowed.	Number of Judgments entered after trial.	(a) Total amount of such Judgments without costs.	(b) Total amount of costs taxed thereunder.	(c) Total amount of Disbursements allowed.	Number of Judgments.	Number of Writs of Execution issued against Goods and Lands.	Number of Writs of *Ca Sa.* issued.	Number of Certificates under Creditors' Relief Act.
	$ c.	$ c.	$ c.		$ c.	$ c.	$ c.				
29	13,282 79	980 98	220 31	2	270 00	261 82	123 06	29	26	....	....
17	4,520 20	452 33	143 58	3	300 00	312 52	128 71	20	22	....	....
7	1,317 98	165 58	52 68	1	294 78	205 57	89 72	8	6	....	....
44	9,191 80	839 00	257 12	4	471 48	255 82	111 21	48	93	....	....
6	1,708 83	86 60	26 19	1	133 90	49 85	24 31	7	5	....	3
15	3,643 89	227 45	60 21	5	595 00	676 68	221 22	20	19	....	....
23	5,554 84	570 36	70 04	15	1,162 40	1,416 46	811 59	38	29	....	5
6	1,221 09	107 80	26 38	1	146 45	54 49	26 00	.....	6	....	....
13	3,001 78	252 26	77 83	8	954 81	685 41	286 44	16	13	1	....
2	726 55	38 35	6 71	.....	.....	.....	.....	2	2	....	....
3	923 57	32 60	12 66	.....	.....	.....	.....	3	4	....	....
18	3,845 27	263 20	108 00	6	461 77	576 51	271 66	24	19	....	1
14	3,356 43	409 43	107 05	1	173 50	92 85	47 65	15	22	....	....
28	6,983 46	327 33	138 61	2	177 60	53 97	55 65	28	26	....	12
14	3,114 92	194 18	33 15	3	556 33	215 10	102 03	17	15	....	....
.....	3,061 00	317 00	130 00	1	.....	.....	.....	.....	15	....	.. .
12	2,422 86	249 21	66 01	5	711 64	652 96	276 52	17	6	....	4
3	846 57	37 63	9 43	.....	.....	.....	.....	3	4	....	....
6	1,222 27	125 22	35 11	2	123 67	172 30	89 41	8	6	....	....
.....	.....	.....	.....	2	333 94	174 32	93 27	2	2	....	....
79	16,690 45	1,302 15	352 31	6	914 75	561 48	183 06	85	78	....	....
3	519 92	47 86	15 93	.....	.....	.....	.....	3	10	....	....
5	1,046 61	79 92	24 37	1	133 40	96 46	54 84	6	4	....	....
1	314 01	31 98	9 87	2	.....	234 22	148 20	3	5	....	....
13	2,447 60	270 49	94 55	3	525 00	398 67	247 29	14	30	....	....
13	3,261 84	137 81	59 64	1	150 00	45 65	53 02	14	25	....	4
13	3,051 30	234 34	68 56	7	898 84	566 59	192 97	19	15	....	1
1	110 00	13 90	.....	.....	.....	.....	.....	1	3	....	....
5	1,210 50	73 90	28 45	4	675 75	305 47	168 52	9	12	1	....
9	1,787 49	193 77	71 37	4	961 00	501 63	286 89	13	24	....	....
22	5,436 11	359 28	92 85	3	548 94	136 64	92 77	23	30	....	...
7	1,553 16	119 18	41 16	1	87 50	172 94	107 63	8	10	....	....
9	1,758 66	157 32	45 72	1	92 67	187 19	127 19	9	7	....	5
4	1,507 03	104 40	24 04	3	783 72	147 58	58 01	6	12	....	6
7	....	103 67	31 01	1	.....	29 24	.....	8	7	....	....
19	4,677 15	406 85	127 31	4	.....	156 99	63 35	23	22	....	....
29	5,676 43	746 87	223 39	2	254 06	309 80	147 87	31	32	....	5
19	5,094 90	385 96	81 11	3	2,050 48	426 45	171 35	18	40	....	1
16	1,629 10	100 53	33 53	.....	.....	.....	.....	6	3	....	5
16	3,865 55	286 11	91 90	1	150 10	81 34	36 67	17	15	....	....
6	1,722 45	65 68	43 06	1	....	52 55	6 99	7	8	....	....
15	3,326 89	378 54	132 52	1	116 64	172 66	84 96	16	20	....	1
69	15,141 78	1,172 28	332 41	6	876 07	347 20	183 15	75	51	....	5
277	64,186 21	4,492 23	1,058 67	52	6,103 41	4,704 86	1,217 89	329	281	....	....
917	215,961 24	16,931 53	4,714 80	169	22,239 60	15,492 29	6,391 07	939	1,084	2	58

APPENDIX D.—Being a return of business transacted by County Court Clerks throughout

Counties or Districts.	Amounts for which issued, without costs.	Amount of Costs allowed thereunder.	Amount of money paid into Court with defence.	Number of days of sitting of Judge with Jury.	Number of days of sitting of Judge without Jury.	Number of days of sittings of County Court.	Amount of Jury fees paid County Treasurer.	Number of Partition Matters.	Amount of money paid thereunder.
	$ c.	$ c.	$ c.				$ c.		$ c.
Algoma			224 10		2	4	1 50		
Brant			103 00			5	6 00		
Bruce				1	3	4	1 50		
Carleton			69 89	18		18	21 00		
Dufferin	1,075 65	26 70				2	3 00		
Elgin				7	4	11	6 00		
Essex	467 79	7 45	155 00	12	2	14	13 50	1	
Frontenac						6	1 50		
Grey						10	9 00		
Haldimand				5		5	4 50		
Halton						2	1 50		
Hastings	124 46	7 10	20 00			18	24 00		
Huron				1		1	4 50	3	3,464 31
Kent	10,059 16	54 41	103 44	8	6	14			
Lambton						5	4 50		
Lanark						1	1 50		
Leeds and Grenville	1,044 73	35 18	52 00			4	7 50		
Lennox and Addington			128 60	4		4	3 00		
Lincoln			60 00			2			
Manitoulin				1	2	3			
Middlesex				14	2	16	15 00		
Muskoka					2				
Nipissing				3		3	1 50		
Norfolk				4		4	3 00		
Northumberland and Durham						9	9 00		
Ontario	1,597 17	27 35			5	5			
Oxford	207 00	9 65		6	1	7	13 50		300 00
Parry Sound						2			
Peel						10	9 00		
Perth				4	5	9	6 00		
Peterborough			124 00			6	6 00		
Prescott and Russell				3			1 50		
Prince Edward	1,702 13	48 79				2	1 50		
Rainy River	990 95	54 50				4			
Renfrew				1	1	5	1 50		
Simcoe				2	2	4	4 50		
Stormont, Dundas and Glengarry	519 25	53 70		2	3	5	3 00		
Thunder Bay	3,135 75	13 00	6 00	2	7	9	4 50		
Victoria									
Waterloo								5	1,189 87
Welland									164 81
Wellington	2,598 66	15 00	115 00	3	7	10	13 50		
Wentworth	3,013 35	20 85	277 74	16	4	20	43 50		
York						78	63 00		
Totals	24,938 88	346 33	1,438 77	117	58	341	313 50	9	5,118 99

the Province of Ontario during the year ending 31st December, 1895.—*Concluded.*

Amount paid out.	Amount at joint credit of Judge and Clerk, including interest allowed.	Number of Chattel Mortgages and Bills of Sale filed.	Total amount secured by such Mortgages.	Number of Mortgages renewed.	Number of Discharges filed.	Number of Assignments filed under R. S. O., chap. 124.	Number of Hire receipts filed under 57 Vict chap. 19.	Total amount secured by such receipts, etc.	Amount of fees earned by Clerk of Court, not including salary paid.
$ c.	$ c.		$ c.					$ c.	$ c.
.....	.....	166	477,722 80	38	.....	7	56	16,058 59	342 65
.....	1,870 45	549	271,161 61	182	15	20	55	7,036 00	482 90
676 62	4,600 27	659	413,354 00	354	10	22	57	11,918 35	833 45
.....	.....	434	363,213 68	354	38	35	78	48,186 62	1,144 50
.....	.....	254	102,919 38	113	5	11	47	9,888 05	315 80
.....	350 89	540	163,876 80	144	4	22	69	5,792 83	601 16
.....	.....	419	168,010 33	172	10	20	84	9,734 62	736 35
.....	335 07	531	230,118 58	185	5	17	142	8,860 45	421 15
.....	.....	1,243	339,029 51	439	8	19	54	6,186 80	746 10
.....	.....	144	38,014 99	64	4	4	18	998 00	205 35
.....	.....	126	36,725 37	46	8	8	9	2,919 00	164 64
.....	1,116 84	1,017	261,302 00	334	23	16	212	29,151 58	1,018 60
2,412 83	3,733 93	417	168,046 93	164	8	35	57	11,870 80	547 30
.....	103 44	826	291,276 39	327	7	17	468	21,740 29	989 64
.....	.....	399	123,800 40	195	5	27	63	6,574 50	544 55
.....	.....	188	99,807 73	55	6	8	4	2,103 00	298 00
.....	.....	356	97,496 91	161	12	23	40	6,763 37	634 54
.....	.....	191	59,286 32	118	3	11	38	1,479 50	320 09
.....	.....	223	79,023 21	133	5	11	34	4,794 89	463 40
.....	.....	83	62,461 37	28	5	.....	10	785 15	89 40
.....	.....	614	220,243 35	359	14	42	114	23,360 19	1,211 80
.....	.....	.....	.....	.....	.....	.....	82	9,639 83	46 45
.....	.....	152	75,651 68	33	6	11	7	935 69	90 50
.....	1,801 73	294	49,863 99	100	12	17	107	4,867 31	458 45
.....	.....	498	131,096 90	336	14	9	55	8,821 42	811 55
.....	.....	348	143,150 48	205	8	17	39	10,568 22	576 70
657 49	2,030 47	383	111,383 21	151	18	35	34	7,270 74	767 10
.....	.....	.....	.....	.....	.....	.....	.....	.....	20 00
.....	54 21	185	66,534 71	75	3	13	8	2,725 00	368 04
.....	.....	232	138,490 07	67	6	25	36	4,042 14	509 60
.....	.....	247	342,602 59	141	3	9	30	2,420 90	429 35
30 43	.....	224	154,900 18	65	9	6	31	1,115 00	340 77
.....	.....	184	56,961 77	107	5	.....	32	1,135 30	423 75
.....	.....	.....	.....	.....	.....	.....	.....	.....	76 38
.....	.....	220	64,197 61	111	6	15	38	2,815 25	384 54
.....	.....	714	538,192 57	309	13	29	137	18,256 08	812 50
.....	.....	517	219,344 35	145	17	6	107	9,426 84	614 10
.....	.....	59	23,193 80	19	1	6	45	5,122 84	372 95
.....	.....	451	195,385 00	159	4	8	55	9,438 25	488 78
137 46	1,052 41	290	284,559 43	109	10	29	75	11,239 26	386 25
.....	164 81	258	86,218 22	65	9	6	30	1,359 13	304 75
.....	5,181 44	536	217,298 85	181	4	13	35	10,423 37	601 15
.....	.....	407	350,911 29	320	15	36	98	13,420 65	1,276 87
.....	.....	2,164	1,057,747 00	957	66	132	344	105,179 00	5,214 41
3,914 83	22,395 96	17,742	8,374,575 37	7,620	424	797	3,131	485,424 80	27,486 22

APPENDIX E.—Being a return of business transacted by Surrogate Registrars

Counties or districts.	Total number of Probates issued.	Total number of Letters of Administration issued.	Total number of Letters of Guardianship issued.	Total number of Probates and Letters of Administration issued under 57 Vict., cap. 22.	Total number of Probates and Letters issued under R.S.O. 1887, c. 50, s. 67, as amended by 53 Vict., c. 17, s. 17 and included in above.	Number of Wills proved or Guardianship valued as			
						Above $100,000.	From $50,000 to $100,000.	From $25,000 to $50,000.	From $10,000 to $25,000.
Algoma	8	10	.....	.....	4	..	.....	.....	.....
Brant	79	39	4	7	17	...	1	1	7
Bruce	98	38	4	16	19	. ....	.....	1	1
Carleton	92	59	4	25	21	1	.....	.....	7
Dufferin	22	17	5	7	5	.....	.....	.....	.....
Elgin	92	44	8	10	8	1	1	1	11
Essex	61	23	4	20	11	.....	.....	.....	2
Frontenac	65	36	3	10	9	.....	.....	1	5
Grey	101	52	4	25	13	1	1	.....	1
Haldimand	52	19	4	11	10	.....	.....	.....	1
Halton	49	17	.....	8	7	....	.....	1	.....
Hastings	90	42	9	25	11	.....	.....	2	3
Huron	125	55	4	18	6	.....	1	1	7
Kent	71	39	6	15	46	.....	.....	.....	4
Lambton	80	37	3	5	23	.....	.....	1	1
Lanark	38	19	3	7	12	.....	1	.....	6
Leeds and Grenville	111	38	4	22	12	.....	.. ...	1	3
Lennox and Addington	27	13	5	7	6	.....	.....	1	...
Lincoln	31	28	3	5	10	.....	1	.....	2
Manitoulin	6	3	.....	2	5	.. ...	.....	.....	.....
Middlesex	189	81	10	35	37	.....	.....	2	9
Muskoka	9	6	1	4	5	.....	.....	.....	1
Nipissing	3	4	1	4	1	.....	.....	.....	.....
Norfolk	51	17	3	8	10	.....	1	.....	.. ...
Northumberland and Durham	117	44	7	23	16	.....	.....	.....	7
Ontario	58	31	3	11	7	....	.....	.....	1

throughout the Province of Ontario during the year ending 31st December, 1895.

and Letters of Administration issued where personalty follows :				Total amount of Personalty devolving.	Total amount of Realty to be administered under R. S. O. 1887, c. 108, s. 4.	Amount of Fees collected by Surrogate Registrar for—			
From $5,000 to $10,000.	From $1,000 to $5,000.	From $400 to $1,000.	$400 and under.			Registrar's fees.	Judge's fees.	Fee fund.	Total.
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3	8	2	5	20,883 78	.....	130 21	56 00	32 50	218 71
10	31	29	43	379,420 22	485,409 00	1,077 99	659 50	370 00	2,107 49
4	57	35	32	245,378 00	237,592 00	1,307 54	557 25	358 50	2,223 29
3	55	40	49	1,819,575 02	61,056 66	1,290 42	2,120 00	1,204 60	4,615 02
1	14	17	12	47,492 05	76,162 00	369 60	136 70	225 70	732 00
33	66	21	10	432,557 17	341,370 00	1,244 00	809 00	462 00	2,515 00
4	22	21	34	124,502 45	1,533,630 00	682 82	242 05	191 00	1,115 87
3	38	27	27	181,718 75	207,542 00	968 84	591 50	290 00	1,850 34
7	34	55	58	404,208 34	58,741 60	1,153 85	755 75	458 00	2,367 60
2	21	25	22	94,112 42	142,060 00	684 75	385 05	162 00	1,231 80
4	27	17	18	132,241 02	140,170 00	670 98	358 50	177 50	1,206 98
9	30	40	54	336,087 50	31,950 00	1,184 18	668 95	387 50	2,240 63
19	82	34	40	535,055 37	83,222 00	1,837 15	1,106 00	580 50	3,553 65
3	28	29	46	153,993 04	197,089 80	792 63	307 45	252 00	1,352 08
7	39	26	35	240,905 39	254,752 00	790 55	432 50	295 50	1,518 55
12	23	6	12	135,218 00	157,193 00	531 00	375 25	246 00	1,152 25
11	46	42	46	310,574 44	61,210 00	1,292 78	639 90	415 50	2,348 18
5	17	7	15	115,077 44	62,850 00	509 67	299 60	123 50	932 77
4	24	5	5	62,938 81	144,068 00	504 48	326 30	188 50	1,019 28
1	1	2	5	10,170 00	1,033 00	34 26	20 00	12 00	66 26
16	97	64	92	902,603 60	56,965 00	2,342 95	1,308 60	775 00	4,426 55
1	3	3	8	33,413 77	.....	92 40	39 25	27 50	159 15
.....	3	3	1	8,236 15	4,675 00	36 56	.....	15 50	52 06
2	25	18	22	129,653 50	15,557 00	649 00	321 70	172 00	1,142 70
14	55	41	51	379,876 28	35,231 00	1,336 93	706 00	458 50	2,501 43
6	35	18	29	182,132 49	5,530 20	754 45	531 85	238 00	1,524 30

APPENDIX E.—Being a return of business transacted by Surrogate Registrars through-

Counties or districts.	Total number of Probates issued.	Total number of Letters of Administration issued.	Total number of Letters of Guardianship issued.	Total number of Probates and Letters of Administration issued under 57 Vict., cap. 22.	Total number of Probates and Letters issued under R.S.O. 1887, c. 50, s 67, as amended by 53 Vict., c. 17, s. 17 and included in above.	Number of Wills proved or Guardianship valued as			
						Above $100,000.	From $50,000 to $100,000.	From $25,000 to $50,000.	From $10,000 to $25,000.
Oxford	74	46	5	21	11	1	1	1	5
Parry Sound	10	10	2	6	2	.....	.....	.....	.....
Peel	47	18	2	13	10	.....	.....	.....	5
Perth	95	50	4	47	18	.....	1	.....	6
Peterborough	47	31	.....	16	13	.....	.....	.....	.....
Prescott and Russell	20	13	.....	3	7	.....	.....	.....	1
Prince Edward	37	11	1	15	15	.....	.....	.....	1
Rainy River	4	5	1	.....	.....	.....	.....	.....	1
Renfrew	36	17	1	12	5	.....	.....	1	1
Simcoe	111	64	12	24	20	.....	1	1	3
Stormont, Dundas and Glengarry	52	33	3	12	15	.....	.....	2	2
Thunder Bay	3	6	1	2	.....	.....	.....	.....	1
Victoria	44	14	1	8	9	.....	.....	.....	1
Waterloo	118	28	1	27	10	.....	.....	.....	14
Welland	55	29	.....	6	8	.....	.....	1	2
Wellington	104	52	9	29	15	1	1	.....	1
Wentworth	153	62	7	31	23	.....	3	1	10
York	413	226	23	53	94	2	7	6	33
Totals	3,148	1,526	175	655	606	7	21	26	166

out the Province of Ontario during the year ending 31st December, 1895.—*Concluded.*

and Letters of Administration issued where personalty follows :				Total amount of Personalty devolving.	Total amount of Realty to be administered under R.S.O. 1887, c. 108, s. 4.	Amount of Fees collected by Surrogate Registrar for—			
From $5,000 to $10,000.	From $1,000 to $5,000.	From $100 to $1,000.	$100 and under.			Registrar's fees.	Judge's fees.	Fee fund.	Total.
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8	42	26	36	1,166,639 52	328,220 00	1,536 17	1,558 25	788 50	3,882 92
2	12	6	2	19,383 21	21,239 00	160 50	66 75	52 50	279 75
6	18	18	20	182,919 40	202,771 00	681 09	422 90	176 50	1,280 49
6	51	39	46	361,406 57	370,205 00	1,250 10	747 60	419 00	2,416 70
3	24	17	34	90,622 85	128,320 00	535 20	239 25	162 00	936 45
1	17	4	10	58,881 78	46,950 00	250 94	120 25	84 50	455 69
.....	8	15	15	73,879 76	80,800 00	478 38	119 75	114 00	712 13
2	4	1	2	33,248 00	9,825 00	88 13	59 30	45 00	192 43
4	18	18	11	137,265 22	74,157 00	404 10	216 25	161 00	781 35
10	63	40	57	387,997 61	335,772 08	1,427 28	659 70	448 00	2,534 98
5	26	19	34	198,213 82	2,917 72	714 92	312 50	236 00	1,263 42
1	2	4	2	33,837 27	.....	73 34	34 25	80 90	188 49
6	19	13	20	101,702 91	13,150 00	450 73	187 75	127 00	765 48
17	40	40	36	328,946 14	31,420 00	1,023 65	670 25	474 50	2,168 40
3	30	20	28	186,947 44	265,306 16	931 25	469 35	230 00	1,630 60
13	65	34	50	656,770 00	385,522 00	1,360 46	1,039 15	580 00	2,979 61
13	65	45	85	665,776 85	554,635 67	1,930 37	1,260 30	710 50	3,901 17
40	185	106	164	2,293,075 00	....	4,688 91	3,101 50	2,088 00	9,878 41
324	1,570	1,095	1,423	14,395,538 35	7,246,269 89	40,285 51	25,039 70	15,097 20	80,422 41

APPENDIX F.—Return of fees and emoluments of County Judicial Officers in the

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Algoma	Sault Ste. Marie.	Sheriff	W. H. Carney	1,989 71	1,000 00
		Surrogate Judge	Judge Johnston	56 00	
		Local Master	"	41 65	
		District Attorney	J. J. Kehoe	330 65	
		Clerk of the Peace	"	381 97	600 00
		Local Registrar	T. A. P. Towers	110 30	150 00
		District Court Clerk	"	342 65	600 00
		Surrogate Registrar	"	130 21	
Brant	Brantford	Sheriff	Wm. Watt, Junior	2,378 95	
		Surrogate Judge	Judge Jones	commuted	588 00
		Local Master	† "	commuted	577 00
		County Attorney	G. R. VanNorman, Q.C	779 86	
		Clerk of the Peace	"	904 89	
		Local Registrar	W. B. Rubidge	139 00	675 00
		County Court Clark	"	482 90	
		Surrogate Registrar	"	1,077 99	
Bruce	Walkerton	Sheriff	Fred. S. O'Connor	3,231 51	
		Surrogate Judge	Judge Barrett	557 25	
		Local Master	W. A. McLean	commuted	850 00
		Local Registrar	"	142 00	450 00
		County Attorney	Thos. Dixon	709 66	
		Clerk of the Peace	"	1,850 72	
		County Court Clerk	*M. Goetz	833 45	
		Surrogate Registrar	"	1,307 54	
Carleton	Ottawa	Sheriff	John Sweetland	4,691 52	
		Surrogate Judge	Judge Ross	commuted	500 00
		"	Judge Mosgrove	commuted	500 00

†W. D. Jones *pro tem.* *From 8th May.

Province of Ontario, earned and received during the year ending 31st Dec., 1895.

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,989 71	2,989 71	2,702 36	247 54	2,949 90	1,432 04	1,517 86	.....	1,517 86
56 00	97 65	56 00	97 65	.....	97 65	.....	.....	.....
41 65	.....	41 65	.....	.....	.....	.....	.....	.....
330 65	1,312 62	250 80	166 00	1,449 08	36 95	1,412 13	.....	1,412 13
981 97	.....	875 72	156 56	.....	.....	.....	.....	.....
260 30	1,333 16	260 30	.....	1,333 16	25 00	1,308 16	.....	1,308 16
942 65	.....	942 65	.....	.....	.....	.....	.....	.....
130 21	.....	130 21	.....	.....	.....	.....	.....	.....
2,378 95	2,378 95	2,187 48	90 46	2,277 94	608 78	1,669 16	.....	1,669 16
588 00	1,165 00	.....	.....	1,165 00	.....	1,165 00	.....	1,165 00
577 00	.....	.....	.....	.....	.....	.....	.....	.....
779 86	1,684 75	779 86	.....	1,684 75	.....	1,684 75	.....	1,684 75
904 89	.....	904 89	.....	.....	.....	.....	.....	.....
814 00	2,374 89	814 00	.....	2,366 14	832 50	1,533 64	3 37	1,530 27
482 90	.....	481 15	.....	.....	.....	.....	.....	.....
1,077 99	.....	1,070 99	.....	.....	.....	.....	.....	.....
3,231 51	3,231 51	2,397 58	827 28	3,224 86	1,208 15	2,016 71	1 67	2,015 04
557 25	557 25	557 25	.....	557 25	.....	.....	.....	557 25
850 00	1,442 00	850 00	.....	1,442 00	10 00	1,432 00	.....	1,432 00
592 00	.....	592 00	.....	.....	.....	.....	.....	.....
709 66	2,560 38	556 86	250 60	2,357 28	.....	2,357 28	.....	2,357 28
1,850 72	.....	1,040 71	509 11	.....	.....	.....	.....	.....
833 45	2,140 99	833 45	.....	2,140 99	940 99	1,200 00	.....	1,200 00
1,307 54	.....	1,307 54	.....	.....	.....	.....	.....	.....
4,691 52	4,691 52	4,132 69	644 37	4,777 06	2,114 55	2,662 51	82 50	2,580 01
.....	500 00	.....	.....	500 00	.....	500 00	.....	500 00
.....	350 00	.....	.....	350 00	.....	350 00	.....	350 00

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Carleton.—*Con.*	Ottawa	Local Masters	R. B. Mathieson *pro tem*	1,439 72	
			R. Cassels	151 00	
		County Attorney	N. A. Belcourt	672 25	
		Clerk of the Peace	"	1,336 06	
		Local Registrar acting	J. P. Featherston	1,012 30	450 00
		County Court Clerk	"	1,144 50	
		Surrogate Registrar	"	1,290 42	
Dufferin	Orangeville	Sheriff	Thomas Bowles	1,847 99	
		Surrogate Judge	Judge McCarthy	commuted	168 00
		Local Master	"	157 60	
		County Attorney	W. J. L. McKay	87 40	
		Clerk of the Peace	"	387 65	
		Local Registrar	John McLaren	236 35	675 00
		County Court Clerk	"	315 80	
		Surrogate Registrar	"	369 60	
Elgin	St. Thomas	Sheriff	Dugald Brown	2,650 34	
		Surrogate Judge	Judge Hughes	809 00	
		Local Master	Robert Miller	1,187 96	
		County Attorney	D. J. Donahue	987 21	
		Clerk of the Peace	"	1,004 44	
		Local Registrar	D. McLaws	257 34	675 00
		County Court Clerk	"	601 16	
		Surrogate Court	"	1,244 00	
Essex	Sandwich	Sheriff	J. C. Iler	2,873 83	
		Surrogate Judge	Judge Horne	242 05	
		Local Master	A. H. Clarke *pro tem.*	408 00	
		Deputy Registrar	"	344 05	
		County Attorney	A. H. Clarke	708 22	
		Clerk of the Peace	"	734 99	

Judicial Officers in the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,439 72	1,439 72	1,421 42	18 82	1,440 24	18 82	1,420 45	.....	1,420 45
151 00	151 00	151 00	29 30	180 30	.....	180 30	.....	180 30
672 25	2,008 31	563 25	101 00	1,916 11	871 80	1,044 31	.....	1,044 31
1,336 06	.....	559 20	692 66	.....	.....	.....	.....	.....
1,462 30	3,897 22	1,382 90	34 35	4,022 77	1,090 29	2,932 48	279 74	2,652 74
1,144 50	....	1,138 25	58 43	.....	.....	.....	....	.....
1,290 42	.....	1,166 28	242 56	.....	.....	.....	.....	.....
1,847 39	1,847 99	1,403 68	289 82	1,783 50	580 99	1,202 51	.....	1,202 51
168 00	325 60	168 00	.....	332 10	4 90	327 20	....	327 20
157 60	.....	157 60	6 50	....	.....	.....	....	.....
87 40	475 05	87 40	..... .	475 05	60 00	415 05	.....	415 05
387 65	... .	387 65	.....	.....	.....	.....	.....	.....
911 35	1,596 75	905 65	.....	1,588 09	69 10	1,518 90	1 89	1,517 01
315 80	.....	302 85	10 35	... .	.....	.....	.....	....
369 60	.....	367 90	1 25	.....	.. ..	.....	.....	.....
2,650 34	2,650 34	1,984 17	604 56	2,588 73	1,172 49	1,416 24	..... .	1,416 24
809 00	.....	.....	.....	809 00	.....	809 00	.....	809 00
1,187 96	1,187 96	427 52	868 34	1,295 86	149 00	1,146 86	.....	1,146 86
987 21	1,991 65	863 21	307 62	2,207 91	256 59	1,951 32	.....	1,951 32
1,004 44	....	657 99	379 09	.....	.....	.....	.....	.....
932 34	2,777 50	860 94	21 05	2,722 36	358 30	2,364 06	122 81	2,241 25
601 16	.....	547 11	77 10	.....	....	....	....	.....
1,244 00	.....	1,120 80	95 36	.. . .	.....	.....	.....	.....
2,873 83	2,873 83	2,673 83	357 80	3,031 63	1,891 71	1,139 92	.....	1,139 92
242 05	242 05	....	.....	242 05	.....	242 05	.....	242 05
408 00	2,195 26	333 10	183 50	2,461 08	960 00	1,501 08	.....	1,501 08
344 05	.....	332 05	16 90	.. ..	....	....	.....	.....
708 22	.....	550 23	188 65	.....	....	.....	.....	.....
734 99	....	491 95	364 70	.....	.....	.....	.....	.....

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Essex.—*Con.*	Sandwich	Deputy Clerk of Crown.	F. E. Marcon.....	1,021 85	450 00
		County Court Clerk....	"	736 35	... .
		Surrogate Registrar....	"	682 82	.....
Frontenac.....	Kingston	Sheriff	Wm. Ferguson	1,512 14	100 00
		Surrogate Judge	Judge Price	commuted	752 00
		Local Master.....	J. M. Machar, Q.C ..	598 45	.....
		County Attorney	J. L. Whiting, Q.C..	371 50	.....
		Clerk of the Peace	" ..	932 09	.....
		Local Registrar.....	Archibald McGill....	205 50	675 00
		County Court Clerk....	"	421 15	.....
		Surrogate Registrar....	"	968 84	....
Grey	Owen Sound ...	Sheriff	C. H. Moore	3,634 56	.....
		Surrogate Judge	Judge Creasor	755 75	.....
		Local Masters	" .... Judge Morrison ...	721 13	.....
		County Attorney	A. G. MacKay	631 44	.....
		Clerk of the Peace	Wm. Armstrong	939 70	....
		Local Registrar	George Inglis.....	173 20	750 00
		County Court Clerk....	"	746 10	....
		Surrogate Registrar....	"	1,153 85	.....
Haldimand ...	Cayuga	Sheriff	R. H. Davis	1,759 47	100 00
		Surrogate Judge	Judge McMillan	385 05	.....
		Local Master.....	"	162 56	.....
		County Attorney	C. W. Colter	720 86	.....
		Clerk of the Peace	"	1,185 17	.....
		Local Registrar.....	Jas. Mitchell.....	94 00	600 00
		County Court Clerk....	"	205 35	....
		Surrogate Registrar....	"	684 85	. ...
Halton	Milton	Sheriff	M. Clements	1,333 93	.....

Judicial Officers in the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,471 85	2,891 02	1,471 85	.....	2,891 02	294 67	2,596 35	178 90	2,417 45
736 35	.....	736 35	.....	.....	.....	.....	.....	.....
682 82	.....	682 82	.....	.....	.....	.....	.....	.....
1,612 14	1,612 14	1,612 14	.....	1,612 14	608 72	1,003 42	.....	1,003 42
.....	752 00	.....	.....	752 00	.....	752 00	.....	752 00
598 45	598 45	104 65	208 90	313 55	110 50	203 05	.....	203 05
371 50	1,303 59	338 50	45 00	1,278 24	25 00	1,253 24	.....	1,253 24
932 09	.....	492 34	402 40	.....	.....	.....	.....	.....
880 50	2,270 49	814 30	15 00	2,218 46	667 00	1,551 46	5 14	1,546 32
421 15	.....	325 69	87 24	.....	.....	.....	.....	.....
968 84	.....	822 94	153 29	.....	.....	.....	.....	.....
3,634 56	3,634 56	2,804 57	1,002 88	3,807 45	1,269 32	2,538 13	57 63	2,480 50
.....	755 75	.....	.....	755 75	.....	755 75	.....	755 75
721 13	721 13	530 53	252 04	782 57	17 50	765 07	.....	765 07
631 44	631 44	506 85	244 15	751 00	28 51	722 49	.....	722 49
939 70	939 70	939 70	252 96	1,192 66	270 00	922 66	.....	922 66
923 20	2,823 15	883 10	.....	2,724 95	270 20	2,454 75	140 95	2,313 60
746 10	.....	724 20	.....	.....	.....	.....	.....	.....
1,153 85	.....	1,072 40	45 25	.....	.....	.....	.....	.....
1,859 47	1,859 47	1,833 33	75 20	1,908 53	469 26	1,439 27	.....	1,439 27
385 05	547 61	385 05	.....	563 66	.....	563 66	.....	563 66
162 56	.....	151 81	26 80	.....	.....	.....	.....	.....
720 86	1,906 03	501 89	123 00	1,884 19	337 00	1,547 19	.....	1,547 19
1,185 17	.....	769 71	489 59	.....	.....	.....	.....	.....
694 90	1,585 10	694 90	.....	1,585 10	40 00	1,545 10	4 51	1,540 59
205 35	.....	205 35	.....	.....	.....	.....	.....	.....
684 85	.....	684 85	.....	.....	.....	.....	.....	.....
1,333 93	1,333 93	1,237 83	50 20	1,288 03	433 00	855 03	.....	855 03

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Halton.—*Con*...	Milton	Surrogate Judge	Judge Hamilton.....	358 50	.. . .
		Local Master.....	"	136 76	....
		County Attorney	T. G. Matheson	424 25	.....
		Clerk of the Peace	"	1,083 03	.....
		Local Registrar.....	Walter A. Lawrence.	52 85	600 00
		County Court Clerk....	"	164 64	.....
		Surrogate Registrar....	"	670 98	.....
Hastings	Belleville	Sheriff	G. Hope	3,136 98	.....
		Surrogate Judge	Judge Lazier.....	commuted	500 00
		Local Master and Deputy Registrar.....	S. S. Lazier	commuted	3,000 00
		County Attorney.....	P. J. M. Anderson..	1,230 25	... .
		Clerk of the Peace	" ..	1,760 67	.....
		Deputy Clerk of the Crown	A. G. Northrup.....	746 46	450 00
		County Court Clerk...	"	1,018 60	....
		Surrogate Registar	"	1,184 18	.....
Huron	Goderich	Sheriff	R. Gibbons.....	2,751 04	.....
		Surrogate Judge	*Judge Doyle	794 50	....
		Local Master and Deputy Registrar.....	S. Malcomson	commuted	1,250 00
		County Attorney	Ira Lewis	600 10	.....
		Clerk of the Peace	"	1,290 50	.....
		Deputy Clerk of the Crown	D. McDonald	274 60	500 00
		County Court Clerk....	"	547 30	.....
		Surrogate Registrar....	"	1,867 15	....
Kent	Chatham	Sheriff	John Mercer	3,037 92	....
		Surrogate Judge	Judge Bell	commuted	450 00
		Local Master and Deputy Registrar.....	R. O'Hara	commuted	1,600 00

*Since death of Judge Toms.

Judicial Officers of the Province of Ontario.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
358 50	495 26	358 50	.....	495 26	.....	495 26	....	495 26
136 76	.....	136 76	.....	....	.....	.. ..	.....	.....
424 25	1,507 28	263 80	142 00	1,531 05	30 77	1,500 28	.....	1,500 28
1,083 03	.....	676 51	448 74	.....	.....	.....	.....	.....
652 85	1,488 47	652 85	.....	1,488 47	300 00	1,188 47	.....	1,188 47
164 64	....	164 64	.....	.....	.....	.....	.....	..... .
670 98	....	670 98	.....	....	.....	.....	....	....
3,136 98	3,136 98	2,359 49	.....	2,359 49	577 93	1,781 56	.....	1,781 56
..... .	500 00	... .	.....	500 00	....	500 00	.....	500 00
.....	3,000 00	.....	.....	3,000 00	525 00	2,475 00	.....	2,475 00
1,230 25	2,990 92	857 25	273 50	2,762 97	1,240 27	1,522 70	.....	1,522 70
1,760 67	.....	1,142 86	489 36	.....	.....	.....	.....	.....
1,196 46	3,399 24	796 46	174 00	3,173 24	931 00	2,242 24	98 44	2,143 80
1,018 60	.....	768 60	768 60	....	.....	.....	.....	....
1,184 18	.....	884 18	884 18	....	....	.....	.....	.....
2,751 04	2,751 04	2,649 97	246 13	2,896 10	1,722 81	1,173 29	.....	1,173 29
794 50	794 50	794 50	....	794 50	.....	794 50	.....	794 50
.....	1,250 00	1,250 00	.....	1,250 00	.....	1,250 00	.....	1,250 00
600 10	1,890 60	448 90	185 60	1,924 50	782 00	1,142 50	....	1,142 50
1,290 50	.....	1,015 00	275 00	.....	.....	.....	....	.....
774 60	3,189 05	774 60	.....	3,189 05	749 30	2,439 75	137 95	2,301 80
547 30	.....	547 30	.....	.....	.....	.....	.....	.....
1,867 15	....	1,867 15	.....	.....	....	.....	.....	.....
3,037 92	3,037 92	2,305 86	894 98	3,200 84	1,187 57	2,013 27	1 33	2,011 94
....	450 00	.....	.....	450 00	.....	450 00	.....	450 00
. .....	1,600 00	.....	....	1,600 00	. .....	1,600 00	.....	1,600 00

APPENDIX F.—Return of fees and emoluments of County

County or district.	County towns.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Kent.—*Con*	Chatham	County Attorney	Wm. Douglas, Q.C ..	1,235 16	.....
		Clerk of the Peace	" ..	1,314 65	.....
		Deputy Clerk of the Crown	W. A. Campbell .. .	210 00	450 00
		County Court Clerk...	"	989 64	....
		Surrogate Registrar....	"	792 63	.....
Lambton	Sarnia	Sheriff	Jas. Flintoft	2,515 13	.....
		Surrogate Judge	Judge Robinson	432 50	.....
		Local Masters	" ..	32 50	.....
			Judge Mackenzie..	17 30	.....
		County Attorney	J. P. Bucke	804 53	.....
		Clerk of the Peace	"	1,251 75	.....
		Local Registrar.....	W. R. Gemmell	379 56	675 00
		County Court Clerk....	"	544 55	.....
		Surrogate Registrar....	"	790 55	.....
Lanark	Perth	Sheriff	Jas. Thompson	1,453 15	.....
		Surrogate Judge	Judge Senkler	375 25	.....
		Local Master.....	"	182 20	....
		County Attorney	E. G. Malloch	334 39	.....
		Clerk of the Peace	"	564 17	.....
		Local Registrar.....	Charles Rice	140 00	675 00
		County Court Clerk ...	"	298 00	.....
		Surrogate Registrar....	"	531 00	.....
Leeds and Grenville	Brockville.....	Sheriff	James Smart.....	3,069 39	.....
		Surrogate Judge	Judge McDonald....	commuted	600 00
		Local Masters	"	140 90	.....
			Judge Reynolds	106 48	.....
		County Attorney.....	M. M. Brown	329 22	.....
		Clerk of the Peace	"	583 09	.....
		Local Registrar.....	S. Reynolds	373 25	500 00
		County Court Clerk....	"	634 54	.....
		Surrogate Registrar....	"	1,292 98	....

Judicial officers in the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,235 16	2,549 81	1,235 16	.....	2,549 81	460 00	2,089 81	8 98	2,080 83
1,314 65	.....	1,314 65	.....	.....	.....	.....	.....	.....
660 00	2,442 27	2,403 27	39 00	2,442 27	561 00	1,881 27	38 12	1,843 15
989 64	.....	.....	.....	.....	.....	.....	.....	.....
792 63	.....	.....	.....	.....	.....	.....	.....	.....
2,515 13	2,515 13	1,969 55	585 98	2,555 53	999 32	1,556 21	.....	1,556 21
432 50	465 00	432 50	.....	465 00	.....	465 00	.....	465 00
32 50	.....	32 50	.....	.....	.....	.....	.....	.....
17 30	.....	17 30	.....	17 30	.....	17 30	.....	17 30
804 53	2,056 28	588 03	244 96	2,108 59	7 37	2,101 22	*	2,101 22
1,251 75	.....	1,161 05	114 55	.....	.....	.....	.....	.....
1,054 56	2,389 66	1,054 56	.....	2,389 66	125 00	2,264 66	102 93	2,161 73
544 55	.....	544 55	.....	.....	.....	.....	.....	.....
790 55	.....	790 55	.....	.....	.....	.....	.....	.....
1,453 15	1,453 15	1,120 82	337 64	1,458 46	459 76	998 70	.....	998 70
375 25	557 45	375 25	.....	517 51	.....	517 51	.....	517 51
182 20	.....	11 10	131 16	.....	.....	.....	.....	.....
334 39	898 56	304 14	120 80	1,027 30	106 97	920 33	.....	920 33
564 17	.....	309 10	293 26	.....	.....	.....	.....	.....
815 00	1,644 00	797 00	53 00	1,659 00	40 00	1,619 00	11 90	1,607 10
298 00	.....	214 00	84 00	.....	.....	.....	.....	.....
531 00	.....	362 00	149 00	.....	.....	.....	.....	.....
3,069 39	3,069 39	2,576 24	499 98	3,076 22	1,055 38	2,020 84	2 08	2,018 76
600 00	740 90	600 00	.....	757 27	.....	757 27	.....	757 27
140 90	.....	81 21	76 06	.....	.....	.....	.....	.....
106 48	106 48	78 68	.....	78 68	.....	78 68	.....	78 68
329 22	912 31	329 22	.....	912 31	122 00	790 31	.....	790 31
583 09	.....	583 09	.....	.....	.....	.....	.....	.....
873 25	2,800 77	873 25	.....	2,800 77	393 13	2,407 64	131 52	2,276 12
634 54	.....	634 54	.....	.....	.....	.....	.....	.....
1,292 98	.....	1,292 98	.....	.....	.....	.....	.....	.....

*Earnings of previous years exempt from taxation this year.

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Lennox and Addington ...	Napanee	Sheriff	G. D. Hawley	1,269 12	.....
		Surrogate Judge	Judge Wilkinson	commuted	400 00
		Local Master.....	S. S. Lazier	774 26	.....
		County Attorney.....	*S. C. Warner.....	73 13	.....
		Clerk of the Peace	"	556 01	.....
		Local Registrar	W. P. Deroche	376 75	600 00
		County Court Clerk ...	"	320 09	.....
		Surrogate Registrar....	"	509 67	.....
Lincoln	St. Catharines..	Sheriff	Thomas C. Dawson ..	2,555 62	.....
		Surrogate Judge	Judge Senkler	commuted	566 00
		Local Master.....	F. W. Macdonald....	1,288 96	.....
		Deputy Registrar.....	"	152 39	.....
		County Attorney	John McKeown	270 80	.....
		Clerk of the Peace	"	851 33	.....
		Deputy Clerk of Crown.	J. Clench	211 89	450 00
		County Court Clerk....	"	463 40	.....
		Surrogate Registrar....	"	504 48	.....
Manitoulin	Gore Bay	District Court Clerk ...	William S. Francis ..	89 40	350 00
		Surrogate Registrar....	" ..	34 26	.....
Middlesex.....	London	Sheriff	D. M. Cameron.....	4,395 36	.....
		Surrogate Judge	Judge Elliott.....	commuted	1,000 00
		Local Master	James Shanly.... ..	1,138 88	.....
		Deputy Registrar.....	"	661 16	.....
		County Attorney	Jas. Magee, Q.C.....	1,586 85	.....
		Clerk of the Peace	"	1,722 45	.....
		Deputy Clerk of Crown.	John Macbeth	660 50	500 00
		County Court Clerk....	"	1,211 80	.....
		Surrogate Registrar....	"	2,342 95	... .

* Appointed 30th November, 1895.

Judicial Officers of the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,269 12	1,269 12	635 55	337 77	973 32	180 00	793 32	.....	793 32
.....	400 00	.....	.....	400 00	.....	400 00	.....	400 00
774 26	774 26	425 00	60 00	485 00	125 00	360 00	.....	360 00
73 13	629 14	73 13	.....	515 59	10 50	505 09	.....	505 09
556 01	.....	442 46	.....	.....	.....	.....	.....	.....
976 75	1,806 51	976 75	.....	1,806 51	68 01	1,738 50	23 85	1,714 65
320 09	.....	320 09	.....	.....	.....	.....	.....	.....
509 67	.....	509 67	.....	.....	.....	.....	.....	.....
2,555 62	2,555 62	2,286 37	38 56	2,324 93	427 83	1,897 10	.....	1,897 10
.....	566 00	.....	.....	566 00	.....	566 00	.....	566 00
1,288 96	1,441 35	794 37	808 24	1,781 90	.....	1,781 90	.....	1,781 90
152 39	.....	78 63	100 66	.....	.....	.....	.....	.....
270 80	1,122 13	270 80	131 00	1,499 98	332 15	1,167 83	.....	1,167 83
851 33	.....	851 33	246 85	.....	.....	.....	.....	.....
661 89	1,629 77	1,479 77	78 79	1,614 51	246 79	1,367 72	.....	1,367 72
463 40	.....	.....	52 15	.....	.....	.....	.....	.....
504 48	.....	.....	3 80	.....	.....	.....	.....	.....
439 40	473 66	439 40	.....	473 66	2 00	471 66	.....	471 66
34 26	.....	34 26	.....	.....	.....	.....	.....	.....
4,395 37	4,395 36	4,176 67	228 72	4,405 39	1,833 68	2,571 71	64 34	2,507 37
.....	1,000 00	.....	.....	1,000 00	.....	1,000 00	.....	1,000 00
1,138 88	1,800 04	550 90	166 91	1,378 97	416 27	962 70	.....	962 70
661 16	.....	661 16	.....	.....	.....	.....	.....	.....
1,586 85	3,309 30	1,212 90	445 70	3,470 77	869 25	2,601 52	.....	2,601 52
1,722 45	.....	1,119 39	692 78	.....	.....	.....	.....	.....
1,160 50	4,715 25	1,116 20	11 30	4,739 30	1,227 00	3,512 30	556 15	2,956 15
1,211 80	.....	1,195 50	17 50	.....	.....	.....	.....	.....
2,342 95	.....	2,300 30	98 50	.....	.....	.....	.....	.....

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Muskoka.....	Bracebridge	Sheriff	James W. Bettes	1,301 25	500 00
		Surrogate Judge.....	Judge Mahaffy	39 25	....
		Local Master.	"	....	.....
		District Attorney.....	Thomas Johnson	507 53	400 00
		Clerk of the Peace.....	"	486 31	.....
		Local Registrar.....	Isaac Huber	20 00	600 00
		District Court Clerk...	"	46 45	.....
		Surrogate Registrar....	"	92 40	.....
Nipissing.....	North Bay	Sheriff	H. C. Varin	607 07	415 00
		Surrogate Judge.....	Judge Valin.....	18 75	.....
		Local Master.....	"	....	....
		District Attorney.....	A. G. Browning... ..	104 00	....
		Clerk of the Peace.....	"	186 82	.....
		Local Registrar.....	Thos. J. Bourke	.....	98 79
		District Court Clerk...	"	90 50	296 37
		Surrogate Registrar....	"	36 56	.....
Norfolk	Simcoe	Sheriff	J. Jackson	1,900 00	.....
		Surrogate Judge.....	Judge Robb	321 70	....
		Local Master.....	"	94 59	.....
		County Attorney.....	J. H. Ansley	426 70	.....
		Clerk of the Peace.....	"	939 50	.....
		Local Registrar.....	C. C. Rapelje.....	237 80	675 00
		County Court Clerk....	"	458 45	.....
		Surrogate Registrar....	"	649 00	.....
Northumberland and Durham..	Cobourg.....	Sheriff	I. O. Proctor	3,417 85	.....
		Surrogate Judge.....	Judge Benson.....	commuted	840 00
		Local Master	J. H. Dumble	542 94	....
		County Attorney... ..	J. W. Kerr.....	1,123 14	.....
		Clerk of the Peace.....	"	1,153 17	.....

Judicial Officers in the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous years' services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,801 25	1,801 25	1,542 36	463 76	2,006 12	643 09	1,363 03	.....	1,363 03
39 25	39 25	.....	....	39 25	.....	39 25	.....	39 25
.....	... .	.....	.. ..	.....	.....	.....	.....	.....
907 53	1,393 84	788 63	162 60	1,432 17	37 55	1,394 62	....	1,394 62
486 31	.....	280 08	200 86	.....	.....	.....	.....	.....
620 00	758 85	758 85	.....	758 85	5 85	753 00	.....	753 00
46 45	... .	....	.....	.....	.....	.....	.....	.....
92 40	.....	.....	.....	.....	.....	... .	.....	.....
1,022 07	1,022 07	735 98	.....	735 98	154 80	581 18	.....	581 18
18 75	18 75	18 75	. . ..	18 75	.....	18 75	.....	18 75
.....	.....	.....	.....	.....	.....	.....	.....	.....
104 00	290 82	104 00	....	290 82	.....	290 82	.....	290 82
186 82	.....	186 82	....	.....	.....	.....	.....	.....
98 79	522 22	98 79	.....	522 22	.....	522 22	.....	522 22
386 87	.....	386 87	.....	.....	.....	.....	.....	.....
36 56	.....	36 56	.....	.....	.....	.....	.....	.....
1,900 00	1,900 00	1,387 34	862 03	2,249 37	412 21	1,837 16	.....	1,837 16
321 70	416 29	321 70	.....	383 86	1 60	382 26	.....	382 26
94 59	.....	53 43	8 73	.....	.....	.....	.....	.....
426 70	1,366 20	426 70	....	1,379 17	38 53	1,340 64	.....	1,340 64
939 50	.....	938 27	14 20	.....	.....	.....	....	.....
912 80	2,020 25	841 80	84 59	2,124 21	51 80	2,072 41	64 48	2,007 93
458 45	.....	415 77	133 82	.....	.....	.....	.....	.....
649 00	.....	454 58	193 65	.....	.....	.....	.....	.....
3,417 85	3,417 85	3,093 74	675 86	3,769 60	2,251 53	1,518 07	.....	1,518 07
.....	840 00	.....	.....	840 00	.....	840 00	.....	840 00
542 94	542 94	384 81	423 06	807 87	20 00	787 87	.....	787 87
1,123 14	2,276 31	852 69	352 26	2,412 35	421 01	1,991 34	.....	1,991 34
1,153 17	.....	716 26	491 14	.....	.. ..	.....	.....	.....

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Northumberland and Durham—*Con*	Cobourg	Local Registrar	John Fisher	301 20	750 00
		County Court Clerk	"	811 55	
		Surrogate Registrar	"	1,336 93	
Ontario	Whitby	Sheriff	J. F. Paxton	2,000 78	
		Surrogate Judge	Judge Burnham	commuted	540 00
		Local Master	Judge Dartnell	420 50	
		County Attorney	J. E. Farewell, Q C	509 06	
		Clerk of the Peace	"	1,187 68	
		Local Registrar	L. T. Barclay	42 00	675 00
		County Court Clerk	"	576 70	
		Surrogate Registrar	"	754 45	
Oxford	Woodstock	Sheriff	James Brady	2,951 40	
		Surrogate Judge	Judge Finkle	1,000 00	
		Local Master	W. T. McMullen	828 11	
		Deputy Registrar	"	376 94	
		County Attorney	F. R. Ball, Q.C	915 30	
		Clerk of the Peace	"	867 08	
		Deputy Clerk of Crown	James Canfield	615 80	450 00
		County Court Clerk	"	767 10	
		Surrogate Registrar	"	1,536 17	
Parry Sound	Parry Sound	Sheriff	Henry Armstrong	2,142 45	500 00
		Surrogate Judge	Judge Mahaffy	66 75	
		Local Master	"		
		District Attorney / Clerk of the Peace	See under Muskoka		
		Local Registrar	E. Jordan	59 45	600 00
		District County Clerk	"	20 00	
		Surrogate Registrar	"	160 50	

Judicial Officers of the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,051 20	3,199 68	999 60	33 40	3,680 86	586 72	3,094 14	347 07	2,747 07
811 55	.....	722 30	193 40	.....	.....	.....	.....	.....
1,336 93	.....	1,248 17	483 99	.....	.....	.....	.....	.....
2,000 78	2,000 78	1,177 41	607 99	1,785 40	508 44	1,493 34	.....	1,493 34
540 00	540 00	.....	.....	540 00	.....	540 00	.....	540 00
420 50	420 50	420 50	.....	420 50	15 00	405 50	....	405 50
509 06	1,696 74	362 76	146 30	1,687 48	451 31	1,236 17	.....	1,236 17
1,187 68	.....	782 24	396 18	.....	.....	.....	.....	.....
717 00	2,048 15	717 00	.....	2,037 40	282 20	1,755 20	25 52	1,729 68
576 70	....	576 70	.....	.....	.....	.....	.....	.....
754 45	.....	743 70	....	.....	.....	.....	....	.....
2,951 40	2,951 40	2,752 93	183 61	2,936 54	1,087 01	1,849 53	....	1,849 53
1,000 00	1,000 00	....	.....	1,000 00	.....	1,000 00	.....	1,000 00
828 11	1,205 05	828 11	89 65	1,343 40	115 00	1,228 40	.....	1,228 40
376 94	.....	376 94	48 70	.....	.....	.....	.....	.....
915 30	1,782 38	784 80	64 60	1,708 46	11 62	1,696 84	.....	1,696 84
867 08	.....	504 93	354 13	.....	.....	....	.....	.....
1,065 80	3,369 07	765 50	193 20	3,012 00	418 17	2,593 83	178 14	2,415 69
767 10	....	520 70	276 30	.....	.....	.....	.....	.....
1,536 17	.....	929 30	327 00	.....	.....	.....	.....	.....
2,642 45	2,642 45	1,720 86	1,417 67	3,638 53	1,507 52	2,131 01	*	2,131 01
.....	66 75	.....	.....	66 75	.. ..	.....	.....	66 7
.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....
659 45	839 95	.....	.....	839 95	11 00	828 95	.....	828 95
20 00	.....	.....	.....	.....	.....	.....	.....	.....
160 50	.....	.....	.....	.....	.....	.....	.....	.....

* Earnings of previous years exempt from taxation this year.

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Peel	Brampton	Sheriff	Robert Broddy	1,952 02	
		Surrogate Judge	Judge McGibbon	422 90	
		Local Master	"	440 44	
		County Attorney	W. H. McFadden	329 35	
		Clerk of the Peace	"	948 15	
		Local Registrar	J. A. Austin	165 30	600 00
		County Court Clerk	"	368 04	
		Surrogate Registrar	"	681 09	
Perth	Stratford	Sheriff	John Hossie	2,762 44	
		Surrogate Judge	Judge Woods	747 60	
		Local Master	John E. Harding, Q.C.	1,523 03	
		County Attorney	John Idington, Q.C.	809 21	
		Clerk of the Peace	"	1,007 20	
		Local Registrar	Jas. MacFadden	802 60	675 00
		County Court Clerk	"	509 60	
		Surrogate Registrar	"	1,250 10	
Peterborough	Peterborough	Sheriff	Jas. A. Hall	1,915 65	
		Surrogate Judge	Judge Weller	239 25	
		Local Master	"	281 55	
		County Attorney	Robert E. Wood	272 25	
		Clerk of the Peace	"	735 21	
		Local Registrar	John Moloney	172 29	675 00
		County Court Clerk	"	429 35	
		Surrogate Registrar	"	535 20	
Prescott and Russell	L'Orignal	Sheriff	Albert Hagar	1,489 46	500 00
		Surrogate Judge	Judge O'Brian	120 25	
		Local Master	"	35 70	
		County Attorney	John Maxwell	89 37	
		Clerk of the Peace	"	887 26	

Judicial Officers of the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,952 02	1,952 02	1,519 05	568 31	2,087 36	1,047 16	1,040 20	....	1,040 20
422 90	863 34	422 90	.....	614 12	15 00	599 12	.....	599 12
440 44	.....	139 12	52 10	.....	....	.....	.....	.....
329 35	1,277 50	272 35	144 00	1,520 89	55 11	1,465 78	.....	1,465 78
948 15	.....	796 50	308 04	....	.....	.....	.....	.....
765 30	1,814 43	761 60	10 80	1,829 13	162 03	1,667 10	16 71	1,650 39
368 04	.....	346 34	18 60	... .	.....	. .....	.....	.....
681 09	.....	676 69	15 10	.....	.....	.....	.....	.....
2,762 44	2,762 44	1,959 45	754 26	2,713 1	1,188 60	1,525 11	.....	1,525 11
.....	747 60	.....	.....	747 60	.....	747 60	.....	747 60
1,523 03	1,523 03	1,304 53	65 90	1,370 43	315 00	1,055 43	.....	1,055 43
809 21	1,816 41	613 01	110 40	1,797 78	374 51	1,423 27	.....	1,423 27
1,007 20	.....	605 19	469 18	.....	.....	.....	.....	.....
1,477 60	3,237 30	1,420 65	34 75	3,211 35	1,234 42	1,976 93	47 69	1,929 24
509 60	.....	509 60	45 95	.....	.....	.....	. .....	.....
1,250 10	.....	1,147 65	52 75	.....	.....	.....	.....	.....
1,915 65	1,915 65	1,887 56	390 20	2,277 76	694 25	1,583 51	.....	1,583 51
239 25	520 80	239 25	.....	520 80	....	520 80	.....	520 80
281 55	.....	281 55	....	.....	.....	.....	.....	....
272 25	1,007 46	212 25	84 52	1,032 98	387 83	645 15	.....	645 15
735 21	.....	386 77	349 44	.....	.....	.....	.....	.....
847 29	1,811 84	847 29	.....	1,811 84	284 75	1,527 09	2 71	1,524 38
429 35	.....	429 35	.....	.....	.....	.....	.....	....
535 20	..... .	535 20	....	.....	.....	.....	.....	....
1,989 46	1,989 46	1,492 79	373 43	1,866 22	713 06	1,153 16	.....	1,153 16
120 25	155 95	120 25	.....	155 95	12 70	143 25	.....	143 25
35 70	.....	35 70	.....	.....	.....	....	.....	.....
89 37	976 63	89 37	.....	971 63	30 50	941 13	.....	941 13
887 26	.....	882 26	.....	.. ..	.....	....	....	....

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Prescott and Russell.—*Con.*	L'Orignal	Local Registrar.....	John Fraser	92 81	675 00
		County Court Clerk....	"	340 77	.....
		Surrogate Registrar....	"	258 94	.....
Prince Edward .	Picton	Sheriff	Jas. Gillespie.....	1,516 06	200 00
		Surrogate Judge	Judge Merrill	119 75	.....
		Local Master.....	C. W. Widdifield....	400 85	....
		County Attorney	J. Roland Brown....	101 45	.....
		Clerk of the Peace	"	614 84	.....
		Local Registrar.....	W.H. R. Allison, Q.C.	.....	600 00
		County Court Clerk....	"	423 75	.....
		Surrogate Registrar....	"	478 38	.....
Rainy River....	Rat Portage....	Sheriff	Wm. H. Carpenter ..	1,399 23	1,000 00
		Surrogate Judge	Judge Fitzgerald	59 30	.....
		Local Master.....	"	.....	.....
		District Attorney.....	H. Langford	60 60	250 00
		Clerk of the Peace	"	80 77	.....
		Local Registrar.....	Frank J. Apjohn	107 50	700 00
		District Court Clerk ..	"	76 38	....
		Surrogate Registrar....	"	98 13	.....
Renfrew	Pembroke	Sheriff	Wm. Moffatt.....	2,654 94	.....
		Surrogate Judge	Judge Deacon	commuted	264 00
		Local Master.....	"	68 65	....
		County Attorney	J. A. Metcalf.....	285 28	....
		Clerk of the Peace	"	695 62	....
		Local Registrar	A. Thomson	78 80	600 00
		County Court Clerk....	"	384 54	.....
		Surrogate Registrar....	"	404 10	.....
Simcoe	Barrie	Sheriff	Hon. Chas. Drury ...	3,919 16	.....
		Surrogate Judge	Judge Ardagh	commuted	585 00

Judicial Officers of the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
767 81	1,367 52	725 06	44 03	1,388 72	276 35	1,112 37	.....	1,112 37
340 77	.....	313 45	.....	.....	.....	.....	.....	.....
258 94	.....	231 68	74 50	.....	.....	.....	.....	.....
1,716 06	1,716 06	1,263 92	248 72	1,512 64	1,034 93	477 71	.....	477 71
119 75	119 75	119 75	.....	119 75	.....	119 75	.....	119 75
400 85	400 85	174 90	117 57	292 47	.....	292 47	.....	292 47
101 45	716 29	86 20	13 24	722 96	42 66	680 30	.....	680 30
614 84	.....	358 83	264 69	.....	.....	.....	.....	.....
600 00	1,502 13	600 00	.....	1,502 13	162 00	1,340 13	.....	1,340 13
423 75	.....	423 75	.....	.....	.....	.....	.....	.....
478 38	.....	478 38	.....	.....	.....	.....	.....	.....
2,329 23	2,329 23	2,046 15	316 63	2,362 78	823 07	1,539 71	.....	1,539 71
59 30	59 30	59 30	.....	59 30	.....	59 30	.....	59 30
.....	.....	.....	.....	.....	.....	.....	.....	.....
310 60	391 37	310 60	.....	391 37	4 00	387 37	.....	387 37
80 77	.....	80 77	.....	.....	.....	.....	.....	.....
807 50	972 01	807 50	.....	972 01	15 00	957 01	.....	957 01
76 38	.....	76 38	.....	.....	.....	.....	.....	.....
88 13	.....	88 13	.....	.....	.....	.....	.....	.....
2,654 94	2,654 94	2,547 98	99 34	2,647 32	718 93	1,829 05	.....	1,829 05
264 00	332 65	261 00	.....	332 65	10 83	321 82	.....	321 82
68 65	.....	68 65	.....	.....	.....	.....	.....	.....
285 28	980 90	285 28	.....	1,082 61	50 53	1,032 08	.....	1,032 08
695 62	.....	482 62	314 71	.....	.....	.....	.....	.....
678 80	1,467 44	678 80	.....	1,467 44	80 65	1,386 79	.....	1,386 79
384 54	.....	384 54	.....	.....	.....	.....	.....	.....
404 10	.....	404 10	.....	.....	.....	.....	.....	.....
3,919 16	3,919 16	3,439 15	821 11	4,260 26	2,273 41	1,986 85	.....	1,986 85
.....	585 00	.....	.....	585 00	.....	585 00	.....	585 00

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Simcoe.—*Con...*	Barrie.....	Local Master.....	J. R. Cotter	436 00	.....
		Deputy Registrar.....	"	262 09	.....
		County Attorney	"	1,259 00	....
		Clerk of the Peace	"	1,244 43	
		Deputy Clerk of the Crown	J. McL. Stevenson ..	285 25	.... 500 00
		County Court Clerk....	" ..	812 50	.....
		Surrogate Registrar....	" ..	1,427 28	.....
Stormont, Dundas and Glengarry	Cornwall	Sheriff	D. E. McIntyre	2,627 76	.....
		Surrogate Judge	Judge Pringle	312 50	.....
		Local Master.....	"	686 20	.....
		County Attorney	Jas. Dingwall	133 40	.....
		Clerk of the Peace	"	545 76	.....
		Local Registrar.....	John A. McDougall..	172 85	750 00
		County Court Clerk....	" ..	614 10	.....
		Surrogate Registrar....	Helen McDonald	714 92	.....
Thunder Bay ..	Port Arthur....	Sheriff	Alex. W. Thompson.	1,540 61	1,000 00
		Surrogate Judge	Judge F. Fitzgerald .	34 25	.....
		Local Master	* "	21 00	.....
		District Attorney.....	Thomas A. Gorham..	246 70	250 00
		Clerk of the Peace	" ..	422 01	.....
		Local Registrar.....	Jas. Meek	325 75	600 00
		District County Clerk..	"	372 95	.. ..
		Surrogate Registrar....	"	73 34	.....
Victoria.	Lindsay.....	Sheriff	John McLennan	2,057 64	... .
		Surrogate Judge	Judge Dean	commuted	500 00
		Local Master.....	"	commuted	900 00
		County Attorney	A. P. Devlin	393 80	.....
		Clerk of the Peace	"	842 10	.....

*Appointed 4th Sept.

Judicial Officers of the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous years' services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
436 00	3,201 52	436 00	.....	3,201 52	153 40	3,048 12	35 01	3,013 11
262 09	....	262 09	.....	.....	.. ..	....	.....	.....
1,259 00	.....	1,259 00	.....	.....	.....	. .. .	.....	.....
1,244 43	.....	1,244 43	.....	.....	.....	....	.....	.....
785 25	3,025 03	785 25	.....	3,025 03	492 50	2,532 53	159 75	2,372 78
812 50	....	812 50	.....	.....	.....	.....	.....	.. ..
1,427 28	.....	1,427 28	.....	.....	.....	....	.....	....
2,627 76	2,627 76	2,307 84	480 08	2,787 92	1,024 84	1,763 68	.....	1,763 08
312 50	998 70	312 50	.....	958 60	.....	958 60	.....	958 60
686 20	.....	621 10	25 00	....	.....	.....	.....	....
133 40	679 16	90 40	79 00	729 92	34 06	695 86	.....	695 86
545 76	.....	369 12	191 40	.....	.....	.....	....	....
922 85	1,536 95	922 85	.....	1,536 95	15 00	1,521 95	2 19	1,519 76
614 10	....	614 10	.....	.....	.....	....	.....	.....
714 92	714 92	714 92	....	714 92	.....	714 92	.. ..	714 92
2,540 61	2,540 61	1,874 83	523 09	2,397 92	602 98	1,794 94	. .....	1,794 94
34 25	55 25	34 25	.....	55 25	.....	55 25	.....	55 25
21 00	.....	21 00	.....	.....	.....	.....	.....	.....
496 70	918 71	384 40	58 80	816 84	144 00	672 84	.....	672 84
422 01	.....	300 36	73 28	.....	.....	.....	.....	.....
925 75	1,372 04	858 95	90 60	1,379 24	64 15	1,315 09	.....	1,315 09
372 95	.....	338 87	9 83	.....	.....	.....	.....	.....
73 34	.....	73 34	7 65	.....	.....	.....	.....	.....
2,057 64	2,057 64	1,728 36	421 90	2,150 26	367 50	1,782 76	.....	1,782 76
500 00	1,400 00	500 00	.. ..	1,400 00	.....	1,400 00	.....	1,400 00
900 00	.....	900 00	.....	.....	.....	....	.....	.....
393 80	1,235 90	314 20	150 30	1,427 63	.....	1,427 63	.....	1,427 63
842 10	.....	539 31	423 82	. .....	.....	.....	.....	.....

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Victoria.—*Con.*	Lindsay	Local Registrar	Wm. Grace	147 35	675 00
		County Court Clerk	"	488 78	.....
		Surrogate Registrar	"	450 73	.....
Waterloo	Berlin	Sheriff	Moses Springer	2,257 50	100 00
		Surrogate Judge	Judge Lacourse	commuted	704 00
		Local Master	"	"	591 00
		County Attorney	W. H. Bowlby, Q.C.	605 30	.....
		Clerk of the Peace	"	1,226 75	.....
		Local Registrar	John McDougall	190 40	1,075 00
		County Court Clerk	"	386 25	.....
		Surrogate Registrar	A. J. Peterson	1,023 65	.....
Welland	Welland	Sheriff	James Smith	2,236 19	.....
		Surrogate Judge	Judge Fitzgerald	469 35	.....
		Local Master	"	98 62	.....
		County Attorney	T. D. Cowper	464 75	.....
		Clerk of the Peace	"	1,406 16	.....
		Local Registrar	I. P. Wilson	178 50	600 00
		County Court Clerk	"	304 75	.....
		Surrogate Registrar	"	931 25	.....
Wellington	Guelph	Sheriff	R. McKim	2,842 59	.....
		Surrogate Judge	Judge Chadwick	1,000 00	.....
		County Attorney	H. W. Peterson	853 73	.....
		Clerk of the Peace	"	1,930 89	.....
		Local Master	A. M. McKinnon	1,029 43	.....
		Local Registrar	"	247 38	500 00
		County Court Clerk	Wm. Carroll	601 15	.....
		Surrogate Registrar	Alex. Mackenzie	1,360 46	.....

Judicial Officers of the Province of Ontario, etc.—*Continued.*

Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
822 35	1,761 86	775 35	107 00	1,883 26	141 50	1,741 76	24 17	1,717 59
488 78	.....	415 75	136 00	.....	.....	.....	.....	.....
450 73	.....	413 16	36 00	.....	.....	.....	.....	.....
2,357 50	2,357 50	2,125 28	182 90	2,308 18	907 93	1,400 25	.....	1,400 25
704 00	1,295 00	1,295 00	.....	1,295 00	6 00	1,289 00	.....	1,289 00
591 00	.....	.....	.....	.....	.....	.....	.....	.....
605 30	1,832 05	488 40	192 00	1,934 55	400 00	1,534 55	.....	1,534 55
1,226 75	.....	1,179 95	74 20	.....	.....	.....	.....	.....
1,265 40	1,651 65	1,265 40	.....	1,651 65	220 00	1,431 65	.....	1,431 65
386 25	.....	386 25	.....	.....	.....	.....	.....	.....
1,023 65	1,023 65	1,023 65	.....	1,023 65	400 00	623 65	.....	623 65
2,236 19	2,236 19	1,720 93	603 02	2,323 95	610 00	1,713 95	.....	1,713 95
469 35	567 97	469 35	.....	573 51	.....	573 51	.....	573 51
98 62	.....	36 90	67 26	.....	.....	.....	.....	.....
464 75	1,870 91	326 25	138 50	1,870 91	652 99	1,217 92	.....	1,217 92
1,406 16	.....	863 73	542 43	.....	.....	.....	.....	.....
778 50	2,014 50	754 50	7 80	1,987 40	321 01	1,666 39	16 63	1,649 76
304 75	.....	291 75	7 00	.....	.....	.....	.....	.....
931 25	.....	923 35	3 00	.....	.....	.....	.....	.....
2,842 59	2,842 59	1,977 46	658 11	2,635 57	1,427 96	1,207 61	.....	1,207 61
1,000 00	1,000 00	.....	.....	1,000 00	.....	1,000 00	.....	1,000 00
853 73	2,844 62	604 73	215 80	2,603 67	877 25	1,726 42	.....	1,726 42
1,990 89	.....	1,285 94	497 20	.....	.....	.....	.....	.....
1,029 43	1,776 81	904 06	105 10	1,746 68	50 00	1,696 68	.....	1,696 68
747 38	.....	718 22	19 30	.....	.....	.....	.....	.....
601 15	601 15	595 45	5 50	600 95	9 65	591 30	.....	591 30
1,360 46	1,360 46	1,320 46	82 33	1,402 79	125 00	1,277 79	.....	1,277 79

APPENDIX F.—Return of fees and emoluments of County

County or district.	County town.	Office.	Officer.	Amount earned.	Salary paid by Government.
				$ c.	$ c.
Wentworth	Hamilton	Sheriff	John W. Murton	4,556 91	....
		Surrogate Judge	*Judge Snider.....	802 80	.....
		Local Master and Deputy Registrar.....	J. E. O'Reilly	commuted	3,500
		County Attorney	John Crerar, Q.C....	944 45	.....
		Clerk of the Peace	"	692 88	.....
		Deputy Clerk of the Crown	S. H. Ghent	438 92	500 00
		County Court Clerk....	"	1,276 87	.....
		Surrogate Registrar....	"	1,930 37	.....
York	Toronto	Sheriff	J. H. Widdifield	6,554 34	.....
		Surrogate Judge	Judge McDougall....	3,101 50	....
		"	Judge Morgan	.....	666 00
		"	Judge Morson	.....	666 00
		County Attorney	H. H. Dewart	3,463 23	....
		Clerk of the Peace ...	T. H. Bull	3,201 45	.....
		Surrogate Registrar....	J. G. Brown	4,688 91	.....
		County Court Clerk....	Hon. A. M. Ross....	5,214 41	.....
Toronto.....	Toronto.....	Sheriff	Fred. Mowat.....	10,493 36	.....
		County Attorney.....	J. W. Curry	3,702 00	.....

* Appointed 22nd July.

Judicial Officers of the Province of Ontario, etc.—*Concluded.*

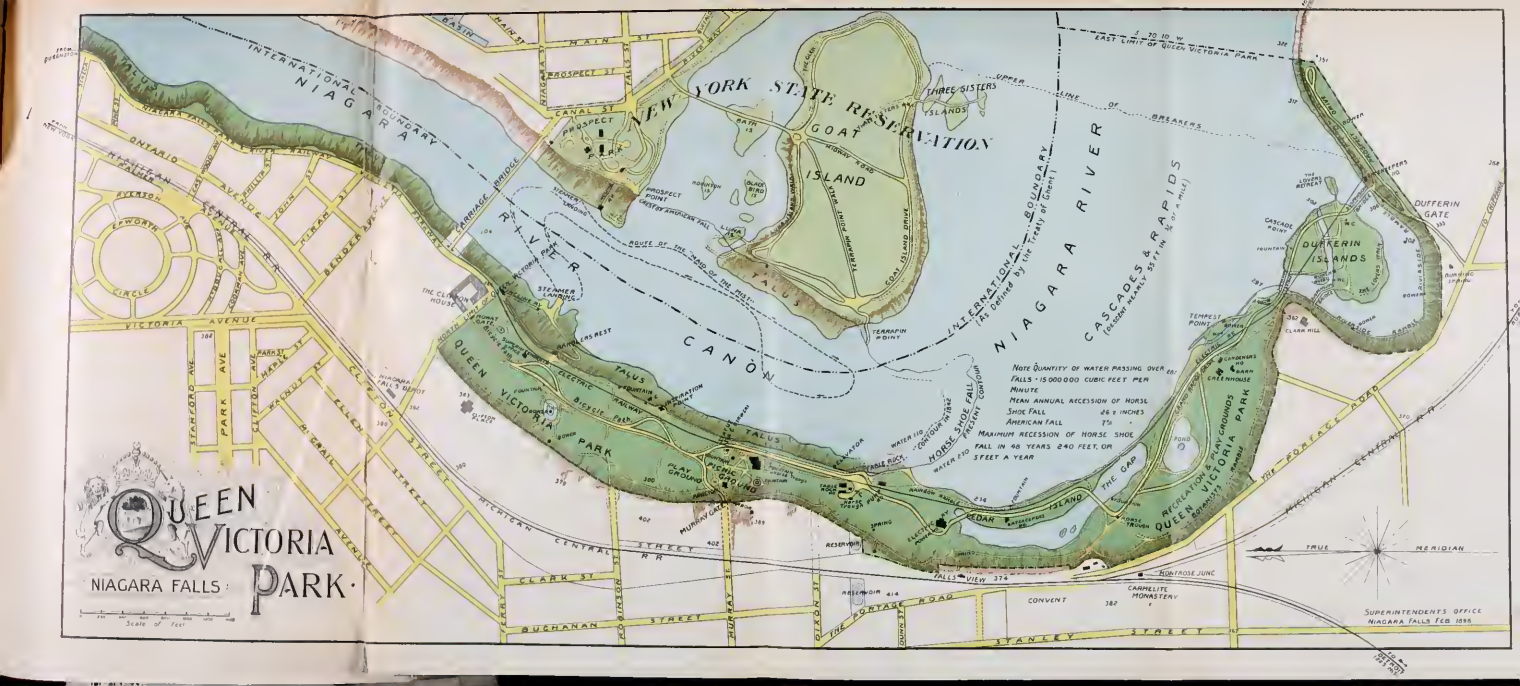
Total earnings and salary in each office.	Total earnings and salary by officer in all his offices.	Total received for present year's services.	Total received for previous year's services.	Total receipts by officer from all his offices.	Total disbursements.	Net income.	Amount paid to Government under 57 V. c. 9.	Actual net income.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
4,556 91	4,556 91	3,763 83	503 85	4,267 68	2,545 51	1,722 17	.....	1,722 17
.....	802 80	.....	.....	802 80	.....	802 80	.....	802 80
.....	3,500 00	.....	.....	3,500 00	270 00	3,230 00	.....	3,230 00
944 45	1,637 33	944 45	.....	1,637 33	.....	1,637 33	.....	1,637 33
692 88	.....	692 88	.....	.....	.....	.....	.....	.....
938 92	4,146 16	916 32	.....	3,847 34	737 64	3,109 70	354 85	2,754 85
1,276 87	.....	1,102 71	19 40	.....	.....	.....	.....	.....
1,930 37	.....	1,794 78	14 13	.....	.....	.....	.....	.....
6,554 34	6,554 34	5,153 47	†1,562 82	6,716 29	2,720 06	3,996 23	508 45	3,487 78
3,101 50	3,101 50	.....	.....	3,101 50	.....	3,101 50	.....	3,101 50
666 00	666 00	.....	.....	666 00	.....	666 00	.....	666 00
666 00	666 00	.....	.....	666 00	.....	666 00	.....	666 00
3,463 23	3,463 23	2,894 33	1,101 80	3,996 13	717 50	3,278 63	17 63	3,260 95
3,201 45	3,201 45	2,404 59	517 10	2,921 69	820 00	2,101 69	.....	2,101 69
4,688 91	4,688 91	4,688 91	.....	4,688 91	974 27	3,714 64	657 32	3,057 32
5,214 41	5,214 41	5,189 16	20 90	5,210 06	1,537 54	3,672 52	636 26	3,036 26
10,493 36	10,493 36	7,656 59	‡2,639 07	10,295 66	5,810 01	4,485 65	725 53	3,760 12
3,702 00	3,702 00	2,796 00	1,074 00	3,870 00	150 00	3,720 00	79 20	3,640 80

† $79.33 earned in 1893.

‡ $134.59 earned in 1893.

SH
A
B

LAKE ERIE
TOWNSHIP OF BERTIE
TOWNSHIP OF WILLOUGHBY
TOWNSHIP OF STAMFORD
TOWNSHIP OF GRANTHAM
TOWNSHIP OF NIAGARA
LAKE ONTARIO
GRAND ISLAND
OF
NEW YORK
STATE
CITY OF BUFFALO
CITY OF NIAGARA FALLS
NAVY ISLAND
NIAGARA FALLS
NIAGARA GLEN
QUEENSTON HEIGHTS
LEWISTON
TONAWANDA
BLACK ROCK
FORT ERIE
OLD FORT ERIE
BRIDGEBURG
LA SALLE
YOUNGSTOWN
TOWN OF NIAGARA
FORT NIAGARA
INTERNATIONAL BOUNDARY
NIAGARA RIVER
Niagara Riverway
CANADA SOUTHERN R.R.
GRAND TRUNK R.R.
N.Y. CENTRAL
Map of
THE
NIAGARA RIVER,
Showing the Lands vested in the
COMMISSIONERS For the QUEEN VICTORIA PARK
Scale of Miles
SUPERINTENDENTS OFFICE NIAGARA FALLS FEB 1896


QUEEN VICTORIA PARK
NIAGARA FALLS
Scale of Feet
INTERNATIONAL NIAGARA
NEW YORK STATE RESERVATION
GOAT ISLAND
THREE SISTERS ISLANDS
NIAGARA RIVER
CASCADES & RAPIDS
DUFFERIN ISLANDS
DUFFERIN GATE
QUEEN VICTORIA PARK
RECREATION & PLAY GROUNDS
CANAL ST
PROSPECT ST
MAIN ST
VICTORIA AVENUE
CLARK ST
BUSHANNAN STREET
STANLEY STREET
THE PORTAGE ROAD
MICHIGAN CENTRAL R.R.
CARMELITE MONASTERY
CONVENT
TRUE MERIDIAN
SUPERINTENDENTS OFFICE
NIAGARA FALLS FEB 1895

TENTH ANNUAL REPORT

OF THE

COMMISSIONERS

FOR THE

QUEEN VICTORIA NIAGARA FALLS PARK,

1895.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, &c., 68 AND 70 FRONT STREET WEST.
1896.

TORONTO, 2nd March, 1896.

SIR,—I have the honor to transmit herewith to be presented to His Honor the Lieutenant-Governor, for the information of the Legislature, the Tenth Annual Report of the Commissioners for Queen Victoria Niagara Falls Park, being for the year ended 31st December, 1895.

I have the honor to be

Sir,

Your most obedient servant,

J. W. LANGMUIR,
Chairman.

The Honorable J. M. GIBSON,
Secretary for the Province of Ontario

TENTH ANNUAL REPORT

OF THE

COMMISSIONERS

FOR THE

QUEEN VICTORIA NIAGARA FALLS PARK.

To the Honorable GEORGE AIREY KIRKPATRICK,
Lieutenant-Governor of the Province of Ontario.

May it please your Honor:

Your Commissioners have much pleasure in submitting, as required by Statute, their Tenth Annual Report on the Queen Victoria Niagara Falls Park, being for the year ended 31st December, 1895.

In their preceding Annual and Supplementary Reports the Commissioners have confined themselves to recording, briefly, the more important incidents which marked the progress of their work during each year. As, however, ten years have now elapsed since the passing of the Act which called the Commission into existence, the Commissioners have thought it appropriate to mark the entry on the second decade of their work by taking in this report a rather wider range, and giving somewhat in detail a history of the development of the Park scheme from its first inception, or, rather, from its first suggestion, to the present time. Such a sketch it was hoped would not be uninteresting to the public at large, while it was felt to be quite within the purview of the duties of the Commission.

The first question which naturally arises in connection with the Park is to whom is the world (for it is a matter of interest to more than the inhabitants of this continent) indebted for the grand idea? There is no doubt that Lord Dufferin may be truly called "The father of the International Parks at Niagara Falls," for to him is unquestionably due the first suggestion and the first official movement in connection therewith. This fact is placed on record in an important official document given later on in this report *in extenso*. In that document (a

memorial signed by hundreds of the leading public men in the United States and Canada) it is mentioned as a well-known and admitted fact, that to Lord Dufferin is due the credit of originating the project. As there exists, however, some misapprehension on this head, and as it is but right that Lord Dufferin, and Canada, should not be deprived of the credit which is their due, it seems desirable to state somewhat in detail the facts of the case.

During his frequent visits to the Falls, while holding the high office of Governor-General of Canada from 1872 to 1878, Lord Dufferin was grieved, as he could not fail to be, to see how visitors to the Falls were annoyed, and their enjoyment of the glorious scene marred, by the hucksters, pedlers and sharpers who swarmed at all the points of interest as well as at all the approaches to the Falls on both sides of the river, levying tolls at every turn on the pleasure and the pockets of the unfortunate tourist. He accordingly took advantage of a casual meeting, in the summer of 1878, with the Honorable Lucius Robinson, then Lieutenant-Governor of the State of New York, to suggest joint action on the part of the Government of the State of New York and the Province of Ontario with a view to providing a remedy for these abuses. To effect this Lord Dufferin further suggested that the two Governments should obtain control of a sufficient quantity of land, on both sides of the Falls, for the free use of the public, where they would be protected from all the vexatious annoyances to which they had hitherto been exposed; each Government, of course, retaining jurisdiction over its own territory, but with a mutual understanding as to the general regulations to be enforced on both sides of the river. Lord Dufferin was not content with merely making the suggestion, but followed it up by making a strong appeal to the Ontario Government to take action on the lines which he had proposed to Governor Robinson, and in fact, made use of all the influence which his high office gave him to bring about the accomplishment of the object. In the course of that same year he took occasion, when making an address at the opening of the Provincial Exhibition at Toronto, to earnestly press the subject upon the attention of the Canadian public.

At the meeting of the Legislature of the State of New York in January, 1879, Governor Robinson, in his annual message, made a strong recommendation to the Legislature to give effect to the suggestions made by Lord Dufferin; and the Legislature responded by directing the Commissioners of the State Survey to report upon the project, and granted authority to them to confer with the representatives either of the Dominion of Canada or of the Province of Ontario, with a view to the accomplishment of the objects sought. These Commissioners entered on their work with much enthusiasm, and instructed Mr. James T. Gardiner, the Director of the State Survey, and Mr. Frederick Law Olmsted, an eminent landscape architect, to make an examination of the ground on both sides of the river and to prepare such plans and to formulate such suggestions as seemed

to them requisite for the carrying out of the scheme. After a thorough study of the subject Messrs. Gardiner and Olmsted submitted plans, having more particular reference to the American side, accompanied by very elaborate reports embodying their views on the scheme and indicating the extent and area of the lands to be acquired, and, generally, the scope of the works that should be undertaken. Their suggestions were adopted by the Board of Commissioners of the State Survey; and following the directions of the Legislature, the Commissioners held a conference by appointment with the members of the Ontario Cabinet in order to interchange views respecting the project. At this conference the maps showing the territory which it was proposed should be controlled by the State and Provincial Governments were submitted and generally approved. In this connection it may be stated that the territory in each case proposed to be acquired was generally the same as was ultimately selected by the respective boards of Park Commissioners, but that in respect to the American side the Reservation eventually decided on does not embrace all the lands at first intended to be taken, but excludes all the strip of territory lying between the high bank and the water's edge from the Upper Suspension Bridge down to the Railway Suspension Bridge.

At this conference the representatives of the Ontario Government expressed their entire sympathy with the park project; but it was pointed out that there were difficulties in the way of the undertaking, and the opinion was expressed that it was only reasonable that the cost of restoring the scenery on the Canadian side of the river should fall upon the Dominion Government, which claimed to have jurisdiction over a considerable portion of the lands proposed to be included in the Park, and was, therefore, in a much better position than the Province to take up the work.

In conformity with the opinion thus expressed, and in order to facilitate any action which the Government of Canada might be disposed to take in the premises, an Act was passed by the legislature of Ontario in March, 1880, (43 Victoria, chapter 13) entitled, "An Act respecting Niagara Falls and the adjacent territory," which conferred upon the Minister of Public Works of Canada, all the authority which the Provincial Government could give, to proceed with the execution of the project, should he so desire.

A very able report was drawn up by the Commissioners of the State Survey and presented to the New York State Legislature at its Session in 1880, together with the plans which had been so carefully considered; and it was recommended that the State should, by purchase, acquire a title to the lands required, and hold them in trust for her people for ever.

Throughout both the United States and Canada Lord Dufferin's earnest appeal, which it has been well said "was at first looked upon rather as an expression of philanthropic sentiment than as an earnest proposal of a practical meas-

ure" was now bearing fruit; and a strong current of public opinion in favor of the project was set in motion by the active exertions of many gentlemen in both countries. A joint memorial signed by nearly seven hundred of the leading literary and scientific men of Canada, the United States and England, was prepared under date 2nd March, 1880, and presented to the Governor-General of Canada and the Governor of New York State. The memorial was as follows:

MEMORIAL TO THE RIGHT HONORABLE THE MARQUIS OF LORNE, K.T., K.C.M.G., ETC., ETC., GOVERNOR-GENERAL OF CANADA.

"The undersigned citizens of several countries and states address you by reason of the suggestion lately made by Lord Dufferin, that the State of New York and the Dominion of Canada should secure and hold, for the world's good, the lands adjacent to the Falls of Niagara.

"The Falls of Niagara are peculiarly exposed to disastrous injury. The heights of snow, the precipitous crags of great mountains, however they may be disfigured by man, can rarely be applied to uses which would destroy their sublimity. But should the islands and declivities of the Niagara River be stripped of their natural woods, and occupied for manufacturing and business purposes; should even the position, size and form of the constructions which the accommodation of visitors will call for, continue to be regulated solely by the pecuniary interests of numerous individual land owners, the loss to the world will be great and irreparable. The danger may be measured by what has already occurred. The river's banks are denuded of the noble forest by which they were originally covered; are degraded by incongruous and unworthy structures, made for advertising purposes, wilfully conspicuous and obtrusive, and the visitor's attention is diverted from scenes to the influence of which he would gladly surrender himself, by demands for tolls and fees, and the offer of services, most of which he would prefer to avoid. Objects of great natural beauty and grandeur are among the most valuable gifts which Providence has bestowed upon our race. The contemplation of them elevates and informs the human understanding. They are instruments of education. They conduce to the order of society. They address sentiments which are universal. They draw together men of all races, and thus contribute to the union and peace of nations.

"The suggestion, therefore, that an object of this class so unparalled as the Falls of Niagara, should be placed under the joint guardianship of the two Governments whose chief magistrates we have the honor to address, is a proper concern of the civilized world, and we respectfully ask that it may, by appropriate methods, be commended to the wise consideration of the Government of the Dominion of Canada."

A similar memorial was addressed to the Honorable Alonzo B. Cornell, Governor of the State of New York.

THE MOWAT GATE, QUEEN VICTORIA PARK.

The Dufferin Islands, From Prospect Drive, Queen Victoria Park.

The hopes entertained by the Government of Ontario, that the Government of the Dominion would take up the work, were not destined to be speedily realized. In the meantime more definite progress was made in prosecuting the American portion of the scheme.

Bills to carry out the recommendations of the Commissioners of the State Survey were introduced in the Legislature of the State of New York in 1880 and 1881, but failed to secure passage. No legislative action was taken in the matter in 1882. On 30th January, 1883, however, a bill was introduced entitled:

"An Act to authorize the selection, location and appropriation of certain lands in the Village of Niagara Falls for a state reservation, and to preserve the scenery of the Falls of Niagara."

The bill was passed, and on the 30th of April, 1883, received the approval of Governor Cleveland, and became law. Under the provisions of this Act a special Board of Commissioners was created to carry out the objects set out in the Act; and, as a result of their labors, 107 acres of land, embracing what was known as "Prospect Park," together with Goat and Bath Islands, and the small islets adjacent thereto with a strip of land along the main shore to Port Day, was selected, appraised and acquired at a total cost, including arbitration and other incidental charges, of $1,452,810.40.

On the 15th of July, 1885, the "State Reservation" was formally opened with appropriate ceremonies in the presence of a great assemblage of the citizens of New York State and Canada. Addresses were delivered by eminent men of both countries, including the Honorable John Beverley Robinson, then Lieutenant-Governor of the Province, and Sir Oliver Mowat, K.C.M.G.

After waiting for several years in the expectation that the Dominion Government would take action in the matter, and finding that there was but little prospect of this being done, the Ontario Government finally determined to assume the responsibility, and thereupon passed an Act on the 30th March, 1885 (48 Victoria, chapter 21), entitled "An Act for the preservation of the natural scenery about Niagara Falls." Under the provisions of this Act, authority was given to the Lieutenant-Governor to appoint a Board of Commissioners, whose duties were to select such lands in the vicinity of the Falls of Niagara as would in their opinion be proper to acquire for the purposes of restoring the scenery to its natural condition, and to preserve the same from further deterioration, as well as to afford to travellers and others facilities for observing the points of interest in the vicinity. Authority was also conferred upon them to prepare surveys of the lands so selected, and to report as to the best means of appropriating, improving and preserving these lands for the purposes of a public park. In pursuance of this Act, Colonel Gzowski, A.D.C., Messrs. John W. Langmuir, and J. Grant Macdonald were, on the of 25th April, 1885, appointed Commissioners, and they immediately proceeded to the discharge of their duties. The greater portion of

the remainder of 1885 was spent in making a careful inspection and survey of all the territory which it was thought should form part of the proposed park. In this important work the Commissioners found that nature had marked out distinctly and by well defined features what should constitute the Ontario Park; and that in determining its boundaries these natural outlines could neither be ignored nor changed. The territory thus marked out may be described as follows: From the Clifton House southwards, following the general direction of the river, and at a distance of about 300 yards from the edge of the rocky wall of the gorge, there is a beautifully wooded escarpment rising over 100 feet above the general level of the plateau immediately adjacent to the gorge, and leading up to the general level of the table land between the two lakes. This escarpment is clearly defined up to and beyond the head of the rapids, and it was decided that a better boundary could not be chosen to delimit the territory reserved for a park. The intention of the Commissioners was at first to select a line embracing the whole of the escarpment, but it was found that the adjoining proprietors put a very high value on the land forming the very edge of the bluff, and in consequence a line a little below the top of the escarpment was chosen; thus securing to the park the slope with its wealth of foliage, while at the same time all commanding views obtained from the table land above were retained by the owners, and their demands for compensation for the portion taken below the table land made less onerous. The lands thus selected comprised a total area of some 154 acres and embrace all the land from the escarpment already described to the river, including Cedar Island, the Dufferin group of islands, and the talus under the cliff from the Clifton House southwards to the margin of the Horse Shoe Fall.

On the 18th of September, 1885, the Commissioners submitted to the Government, plans of the lands thus described, with a recommendation for their acquirement; and an Order in Council, approved by the Lieutenant-Governor, was passed on the 14th of December confirming the selection of the lands thus made.

Immediately following the approval of the selected properties the Commissioners were authorized to employ experts to value the lands, buildings, and improvements in order that they might, if possible, agree with the respective owners as to the price and terms of payment. This work was completed in January, 1886: but as the Commissioners were unable to arrange terms, except in two instances, reference was had to the Provincial Arbitrators, appointed under the provisions of the "Public Works Act of Ontario." Some delay arose in commencing the arbitrations, but they were finally entered upon and the nineteen cases, with respect to which arbitration proceedings became necessary, were practically completed before the close of 1886. The total amount of the awards, together with the costs of the arbitrations, amounted to $436,813.24.

Having secured an appraisal of the lands in the manner prescribed by the Act, the Commissioners had then to devise a financial scheme for the payment of the same, and to provide funds for the improvement and maintenance of the park. The Act provided that, in case the report of the Commissioners so recommended, the Lieutenant-Governor in Council might invite proposals from companies willing to undertake the establishment and maintenance of the Park, subject to certain stringent conditions respecting the raising of revenue from tolls, etc., and in the event of any proposal being satisfactory might transfer to trustees, or to a company incorporated under the "Letters Patent Act," the right of acquiring, for the purpose of a park, the lands selected, at prices agreed upon or to be settled by arbitration, and subject to ratification by the Legislative Assembly. After the most careful and exhaustive consideration of the subject the Commissioners arrived at the conclusion that it was not in the public interest to have the Park and its franchise, under any conditions, controlled by a private company; and they strongly recommended the Government to establish and maintain the Park as the property of the province with its management entirely under provincial control. The Commissioners further recommended that in order to procure funds for the purchase of the lands selected, and for the preliminary works of reclamation and improvement, the Government should authorize the issue of forty-year bonds bearing four per cent. interest to the extent of $525,000, principal and interest being guaranteed by the Province, and to form a charge against the revenues of the Park.

Acting on these recommendations of the Commissioners, the Government introduced and passed an Act at the session of 1887 entitled,

"An Act respecting the Niagara Falls Park (50 Victoria, chapter 13), which is as follows: "Whereas, in pursuance of the Niagara Falls Park Act, the Lieutenant-Governor in Council did approve of certain lands selected by the Commissioners for the purposes set out in the preamble of the said Act; and a map of the Park, showing the boundaries thereof and the lands taken, was submitted to the Lieutenant-Governor and approved in Council, and copies duly certified and authenticated were filed and deposited in the office of the Registrar for the County of Welland, and in the office of the Commissioner of Crown Lands; and whereas the prices to be paid for the said lands have been ascertained and determined and it is expedient to make provision for the payment thereof, and for the means required to establish, maintain, improve and develop the said lands, as and for a public park; therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario enacts as follows:

"1. The Park shall be called 'The Queen Victoria Niagara Falls Park,' and this Act may be cited as 'The Queen Victoria Niagara Falls Park Act, 1887.'

"2.—(1) From and after the commencement of this Act, Colonel Casimir Stanislaus Gzowski, of the City of Toronto, Aide-de-Camp to the Queen; John Woodburn Langmuir and James Grant Macdonald, both of the City of Toronto, Esquires, the persons forming the Board of Commissioners for Niagara Falls Park, and two other persons to be appointed by the Lieutenant-Governor-in-Council, if he thinks fit, shall be a corporation by the name of 'The Commissioners for the Queen Victoria Niagara Falls Park,' and shall continue to hold their respective offices as members of the said corporation during the pleasure of the Lieutenant-Governor-in-Council, and the Lieutenant-Governor-in-Council may, upon the death of any such persons respectively, or on their resignation or removal from office, and from time to time thereafter, appoint other persons to fill their places during pleasure as aforesaid.

"(2) The Commissioners shall receive no compensation except their actual disbursements in discharging their duties.

"3.—(1) The lands selected by the Commissioners of Niagara Falls Park, approved by the Lieutenant-Governor and marked upon the map and contained within a red verge line marked on the said map, with the exception hereinafter mentioned, are hereby vested in the said corporation as trustees for the Province, subject to the payment being made which is hereinafter mentioned. The amounts agreed to be paid or awarded are to be paid upon proper conveyances being executed to the said Commissioners, subject as hereinafter mentioned; or in case no proper conveyance is executed, the money may be paid into court, in accordance with and subject to the terms of 'The Niagara Falls Park Act' and 'The Revised Act respecting the Public Works of Ontario,' as incorporated in the Park Act.

"(2) The payment is to be made within fifteen days from the passing of this Act, with interest to be computed from 30th March, 1887, to the day of payment, at the rate of six per cent. per annum; and payment within such period shall be as effectual as if made within the period fixed for payment by 'The Niagara Falls Park Act.'

"(3) The costs which shall be payable under awards where amounts are paid into court, may be paid to such of the persons interested as appeared before the official arbitrators.

"(4) The land so excepted is the following:

"Excepting a strip of land lying between range number six, as laid down in the plan of the City of the Falls, in the Township of Stamford on the north, and by Street's Mill road and the lands held by the Carmelite monastery on the south, the easterly boundary whereof is at a distance of 130 feet east of the centre line of the Canada Southern Railway, and the westerly boundary whereof being the westerly line of the Park, as appears in the Park plan, filed and registered, between said range number six and Street's Mill road and monastery lands,

and approximately of the width of seventy-nine feet between said range number six and Street's Mill road, which said strip is by this Act excluded from the Park; and except, also, that until the municipal corporation otherwise orders by by-law, subject to section 546 of 'The Consolidated Municipal Act, 1883,' Robinson and Murray streets shall be public entrances to the Park for visitors by carriages or on horses or on foot.

"4.—(1) The Commissioners may agree with the person or persons, or association of persons, whether incorporated or not, who exercise, own or control the taking and collecting of tolls upon that portion of the gravel or macadamized road known as the St. Catharines, Thorold and Niagara Falls road, between Table Rock and the north boundary line of the Park on the aforesaid plan marked, as well as the title, interest and possessory right, which such person or persons as aforesaid have to the said road and the land whereon the same is laid out, together with the toll-house and appurtenances between the said points, for the price to be paid for the said rights to take tolls, and the title, interest and possessory rights, land, toll-house and appurtenances aforesaid.

"(2) And if the Commissioners and the said persons as aforesaid are unable to agree, the sums to be paid shall be determined by arbitration in the manner provided by 'The Niagara Falls Park Act;' and any party to the arbitration may appeal from the award in manner and according to the provisions of 'The Act respecting Awards under the Niagara Falls Park Act.'

"(3) The right and power which the persons aforesaid have to collect tolls over the residue of the road known as the St. Catharines, Thorold and Niagara Falls road shall not be affected by reason of the acquisition by the Commissioners of that portion between the Table Rock and the north boundary line of the Park on the aforesaid plan marked, except by reason of the diminution of mileage, although that part of the road held or retained by the said persons beyond the limits of the Park may be shortened to less than five miles in length.

"(4) In case of an arbitration the arbitrators shall take into account any depreciation, if such there may be, in the value to the persons aforesaid of the remainder of the road.

"(5) The arbitrators shall also determine the value of the whole road between the Table Rock and the point about five miles therefrom, in respect of which tolls are now collected, in order that the Commissioners may have the opportunity of paying to the persons aforesaid, if sanctioned by the Legislature at its next session, the difference between the value of the whole road between said points and the value of the part hereinbefore mentioned of the road aforesaid; and in case of such payment being sanctioned and made within fifteen days after the end of such session, that part of the road built upon the military reservation or ordinance property shall vest in the Commissioners, and the Park shall then extend over and include, as well the military reservation as the land lying between such reser-

vation and the Niagara river, as far as the limit between lots number 92 and 93 of Stamford, but not affecting or interfering with the rights of any companies having bridges over the Niagara river; and all the provisions of this Act and 'The Niagara Falls Park Act' shall apply to such extension of the Park as if included within the Park at the time of the passing of this Act, saving the reservation of a public way between the Clifton House and the limit between said lots 92 and 93, such public way being subject to reasonable tolls upon horses an carriages passing over the same.

"(6) All costs in respect of the matters in this section contained shall be in the discretion of the arbitrators.

"(7) Upon the acquisition by the Commissioners of the interests and rights in that portion of the said road within the Park as now limited, all rights to take and collect tolls, as well as the public rights in the said portion of the road shall be extinguished.

"(8) Nothing in this section is intended to extend to or affect any right or title of the Dominion of Canada to any property known as the military reservation or ordnance property.

"5. The Lieutenant-Governor-in-Council may at any time, or from time to time, vest in the Commissioners, to be held for the purposes of the Park, and subject to any conditions which may be imposed by Order in Council, any part or portion of the Crown Lands, the property of Ontario, lying along the bank of the Niagara river, and not included in the original survey of lots laid out in the Townships of Stamford and Niagara, which lands so vested shall thenceforth form part of the Park and be subject to the control of the Commissioners like the other lands aforesaid.

"6. The provisions hereinbefore and in the former Act contained for authorizing the Commissioners to take, use or acquire, and authorizing all persons to sell and convey, lands, hereditaments or rights, shall extend to any lands, hereditaments and rights which the Commissioners, with the consent of the Lieutenant-Governor-in-Council shall hereafter think proper or expedient to be acquired for the purpose of making, forming and completing any new roads, avenues or approaches to the Park; but nothing in this section contained shall authorize the Commissioners to take any lands for the purpose aforesaid, against the consent of the parties interested therein.

"7.– (1) The Commissioners may raise, for the purposes and objects intended to be secured by 'The Niagara Falls Park Act' and this Act, the sum of $525,000 and no more by the issue of debentures The appropriation and application of the money shall be assured to the satisfaction of the Lieutenant-Governor.

"(2) The debentures shall be under the corporate seal and the hands of two of the Commissioners, and shall be countersigned by the Treasurer of the Province, and the same shall be for such respective amounts payable on the 1st of January,

1927, and at such rate of interest not higher than four per cent. per annum, and shall be disposed of at such prices and on such terms as may be determined by the Commissioners and approved by the Lieutenant-Governor-in-Council. The interest shall be paid half yearly on such days as shall be mentioned in the debentures.

"(3) The debentures shall, equally and without preference of one over the other, be a charge on all the revenues of the corporation, and the Lieutenant-Governor by Order-in-Council may also guarantee payment of the same.

"(4) The debentures so issued and countersigned shall become conclusive of the same having been issued in pursuance of this Act and of the same being guaranteed by the Province of Ontario.

"(5) The debentures shall be transferable by delivery, and the coupons for interest annexed thereto shall also pass by delivery.

"(6) The moneys to be raised by means of the said debentures shall be applied in paying the purchase moneys of the lands to be acquired, in making necessary improvements, contructions and appliances to be used in connection with the Park, in recouping the province for expenses incurred by it with reference thereto, and in paying current expenses of the Park and interest on the said debentures until a sufficient revenue for the said purposes is obtained from the fees charged.

"8. (1) Subject to any direction of the Lieutenant-Governor in Council, the Commissioners may construct and operate inclined planes and hydraulic or other lifts to be worked by any powers; and may build and operate boats or vessels to be used in connection with the Park.

"(2) Subject as aforesaid, the Commissioners may pull down all houses and other erections and buildings on lands acquired and purchased by virtue of this Act, or such of them, or such part thereof as they shall think proper to be pulled down and may level and clear the ground whereon the same stand in such manner as they think proper, and sell, or cause to be sold, the materials of the houses and other buildings to be taken down and removed; and the moneys to be produced by the sale thereof, after deducting expenses, and also the rents and profit to which they may be entitled meantime, shall be applied and disposed of for or towards the purposes of this Act.

"(3) Subject as aforesaid, the Commissioners shall lay out, plant and enclose the Park in such manner as they think fit, and improve and develop the same in accordance with the objects of the Niagara Falls Park Act.

"(4) Subject as aforesaid, the Commissioners shall have power to take and collect tolls for the use of works, appliances, vessels, or works required to afford facilities to visitors to reach and view the points of interest within the park, and involving the expenditure of money in construction and maintenance, as well as for services to be rendered for the convenience or accommodation of visitors.

"(5) Subject as aforesaid, the Commissioners may from time to time make orders and regulations for opening and closing the gates and entrances of the park or any of them, at such hours as they may think fit. This is not intended to interfere with or affect, an agreement which has been heretofore entered into between the Commissioners and the Canada Southern Railway.

"9. The plans of all works proposed, and all tariffs of tolls or payments for the use of works, vessels or services, as well as all by-laws, shall require the approval of the Lieutenant-Governor-in Council before being acted upon.

"10. The park grounds shall be open to the public, subject to any rules and regulations as to management approved by the Lieutenant-Governor in Council.

"11. (1) The Commissioners may make by-laws, to be approved by the Lieutenant-Governor-in-Council, for the use, government, control or management of the park, and for the protection and preservation of all works from injury of the same, and of the trees, shrubs, walks, seats, gates, fences, and palings, and all other parts thereof, and for the exclusion of improper persons from the same, and may alter or revoke any such by-laws and shall appoint a penalty not exceeding twenty dollars for any breach of a by-law.

"(2) The Commissioners may from time to time appoint such officers as may be required for the superintendence and management of the Park, and may also appoint park keepers and other officers to preserve order in the Park, and may from time to time dismiss any persons so appointed; the appointments or dismissals being subject to the approval of the Lieutenant-Governor; and the salaries of such officer shall be payable out of any funds in the hands of the Commissioners.

"(3) Any person entrusted by the Commissioners with the custody or control of moneys by virtue of his employment, shall give security in the manner and form provided by 'The Act respecting public officers.'

"(4) The Commissioners may from time to time employ gardeners and workmen as they deem necessary, and may from time to time dismiss or dispense with the services of such persons subject to any directions of the Lieutenant-Governor in Council.

"(5) The Commissioners shall cause books to be provided and kept and true and regular accounts to be entered therein, of all sums of money received and paid, and of the several purposes for which the same were received and paid; which books shall at all times be open to the inspection of any of the Commissioners, and of the Treasurer of Ontario, and of any person appointed by the Commissioners or Treasurer for that purpose, and of any other person appointed by the Lieutenant-Governor; and the Commissioners and persons aforesaid may take copies of or extracts from the said books.

Under Table Rock, Queen Victoria Park.

American Falls, From Inspiration Point, Queen Victoria Park.

"12. The revenue to be received from the sources authorized by this Act shall be applied as follows:

1. To the necessary outgoing expenses of all works necessary to the preservation, improvement and maintenance of the Park, and to the payment of the salaries of officers and others employed by the Commissioners, and other incidental expenses.

"2. To the payment half-yearly of the interest payable on the debentures authorized to be issued by the Commissioners.

"3. To pay a sinking fund at the rate of one per cent. per annum on the entire amount of the debentures authorized to be issued as aforesaid.

"13. (1) The annual sums for the sinking fund shall be remitted by the Commissioners to the Treasurer of Ontario by half yearly payments in such manner as the Lieutenant-Governor-in-Council from time to time directs, for the investment and accumulation thereof under the direction of the Lieutenant-Governer in Council.

"(2) The sinking fund shall be invested in such securities as the Lieutenant-Governor in Council from time to time thinks proper, and shall, whether invested or not, be applied from time to time under the direction of the Lieutenant-Governor in Council, in discharging the principal and the interest thereon of the debentures.

"14. The Commissioners shall make an annual report for the information of the Legislature, setting forth the receipts and expenditure of the year, and such other matters as may appear to them to be of public interest in relation to the park, or as the Lieutenant-Governor in Council may direct.

15. "Sections 24 to 27 of 'The Act to provide for the better auditing of the public accounts of the Province' shall apply to the accounts of the Commissioners in respect of recipts and expenditures."

16. "Sections 12, 13, 14 and 15 of 'The Niagara Falls Park Act' are hereby repealed."

When the foregoing Act received the assent of the Lieutenant-Governor, the number of Commissioners was increased to four by the appointment of Mr. John A. Orchard, of the Village of Niagara Falls, and the Board immediately appointed Mr. James Wilson, Civil Engineer, to be Superintendent of the Park.

Under the provisions of clause 7 of the Act, the Commissioners invited offers for the purchase of the bonds which they were authorized to issue, and the whole issue of $525,000 was disposed of for $534,667.14, whereupon the awards made in respect of the lands covered by the Park were paid and possession of the several properties taken early in the summer of 1887.

The work of reclamation was immediately begun. The many unsightly structures on the highway along the river bank were removed, cellars filled up, fences and outbuildings cleared away, bridges strengthened and repaired, new

roads and paths constructed, and work on a new hydraulic elevator, to enable visitors to go under the Falls with comfort, was begun. These and many other works essential to a beginning of the general plain of improvement were proceeded with and on the 24th of May, 1888, the park was in fit condition to be thrown open to the public. Shortly after this the citizens of the town of Niagara Falls expressed a desire to manifest their appreciation of the establishment of the park, and taking advantage of the troops being in camp at Niagara-on-the-Lake, a grand civil and military display was held in honor of the event on 21st of June, when no fewer than 13,000 visitors witnessed the imposing military pageant and games, and greatly enjoyed, under the improved conditions, the beautiful grounds which had become the property of the Province.

Power having been conferred upon the Commissioners by the Park Act of 1887 to acquire that part of the St. Catharines, Thorold and Niagara Falls macadamized road which extends along the High bank of the river from Table Rock northwards to the Grand Trunk Suspension Bridge, arbitration proceedings were instituted to determine the value of the property, resulting in the acquirement of the road by the Commissioners, together with all rights of the Company to collect tolls etc. The Commissioners, at the request of the Town of Niagara Falls, extinguished the tolls, and made the road which forms the front street of the town, and which is the prinicpal avenue of access to the Park, entirely free to the public.

Recognizing the propriety of making the park system as complete as possible, the Ontario Government passed an Order-in-Council on the 15th of July, 1887, which was confirmed by a grant under the Great Seal of the Province dated 20th April, 1888, vesting in the Commissioners, for park purposes, all the land upon the top of the high bank of the river, and in the talus below, lying between the surveyed lots and the water's edge, and extending from the north boundary of the Park at the Clifton House down to the lands forming the Military Reserve at Queenston Heights. This addition to the park domain of the whole reach of the magnificent gorge on the Canadian side and bounding the mighty river in all its diversified phases of still water, eddy, current, rapids and whirlpool for over seven miles, while materially increasing the labors of the Commissioners, opened up new fields for the prosecution of the work of preservation and restoration to which they had set their hands.

It soon, however, became apparent that the Dominion Government claimed title to a portion of these lands, locally known as the Chain Reserve, and that an important franchise had been given by that Government, without the knowledge of the Commissioners, for the construction of a carriage road and tramway along the foot of the talus near the water's edge in front of the town, from the ferry landing to the Cantilever Bridge, and with rights for elevators or inclines to connect with the top of the bank at either extremity, the southern one being located

within the limits of the park as defined by the Act. As the operation of such a franchise by individuals acting independently of the Commissioners and partly within the territory under their jurisdiction, could not fail to cause confusion and disorder, the Commissioners took prompt action to test the validity of the title under which the franchise was given, and *inter alia* to set at rest the conflict of authority which had arisen between the Dominion and Provincial Governments, with respect to the ownership of the so-called chain reserve along the bank of the Niagara River. Apparently the chief question at issue was as to whether the reserve forms a part of the Ordnance lands which passed to the Dominion under the British North America Act, or still constitutes a portion of the township of Stamford which became vested in the Province of Ontario at the time of Confederation. After protracted delays the case went to trial in June, 1892, before His Lordship Chancellor Boyd, and was concluded in October of the same year. The learned Chancellor gave a very elaborate judgment in the case, which was altogether in favor of the Commissioners, and upheld the title of the Province to all the lands in question; and the lessees under the Dominion Government were perpetually restrained from going on with their works or in any way interfering with the property vested in the Commissioners under the Park Act. The judgment was appealed from by the Government of Canada, and was tried in October last before their Lordships the Honorable Chief Justice Haggerty and Justices McLennan Osler and Burton, but up to the present date judgment has not been delivered.*

Notwithstanding the action above referred to, the Commissioners received many assurances of the friendly attitude of the Dominion Government to the Park project. Application was therefore made for the formal cession to the Commissioners for Park purposes of whatever rights the Dominion Government had, or claimed to have, in and to the so-called Chain Reserve, as well as any other rights which might attach to any portion of the lands or premises coming within the scope of the suit which had been instituted. After a full consideration of the application a patent, under the Great Seal of Canada, was issued on the 4th of November, 1890, by which all the right, title or claim which the Dominion Government had in respect to any of these lands was surrendered to the Commissioners. As, however, the grant was made subject to any leases, sales, or licenses which had been entered into previous to that date by the Government of Canada, affecting any part of the lands in question, the Commissioners were compellled to prosecute the action then in the Courts in order to determine their status in respect to any such rights leased or granted. Many delays occurred in these proceedings and it was considered inadvisable, until the case is finally disposed of, to undertake works of improvement involving much outlay in this portion of the Park.

* Note.—Since writing this Report a unanimous judgment was rendered in favour of the Commissioners, sustaining in all particulars the decision of Chancellor Boyd.

During the progress of the preliminary works of reclamation and prior to the opening of the property to the public, the Commissioners carefully considered the by-laws and regulations for the government of the Park. It was deemed advisable to follow the suggestion, in this particular, of Lord Dufferin, and make them correspond as closely as possible to the regulations adopted by the Commissioners of the New York State Reservation, which had been in force in their park from the time of its opening in 1885; accordingly the rules adopted for the preservance of order, and the measure of authority given the executive officers of the two Parks, were made to conform as closely as the conditions of the cases would admit.

It may be well to state here that when the Government of Ontario had the Park scheme under consideration there were two important general principles which they regarded as indispensable conditions. These were:—

1. That the Park should not entail a permanent financial burden upon the Province, but that it should become, as soon as possible, entirely self-sustaining.

2. That as far as possible the Niagara Falls Park on the Canadian side should be as free to the public as the corresponding reservation on the United States' side of the river.

The preparation of the measures necessary to give effect to these general principles proved no small or unimportant part of the task which the Government laid upon the shoulders of the Commissioners on their appointment in 1887; and from the outset the question of deriving a sufficient revenue from the Park occupied their most serious attention. From the most reliable data obtainable from railway and other sources respecting the stream of travel to Niagara, it was ascertained that in the years immediately preceding 1887, from 200,000 to 250,000 persons annually visited Niagara, and that of these a large percentage visited all the points of interest in and around the Falls on each side of the river. From a very careful estimate, based upon the returns of revenue, as shown in the evidence taken at the official arbitration proceedings in connection with the various properties required for the Park systems, it appeared that on an average the total cost to each visitor to the various points of interest, under the methods existing prior to the establishment of the Parks, was not less than $1.50. As it was essential, in order to give effect to the second of the general principles referred to, that the charges, while not bearing unduly upon the poorer classes of visitors, should produce sufficient revenue to meet the annual interest on the bonds and the cost of works of improvements and maintenance, the Commissioners proposed that the Park should be absolutely free to all who entered it, in order to enjoy its natural attractions, and obtain the views afforded without artificial aid, but that a fee should be charged, not exceeding fifty cents, to all who might avail themselves of the structural appliances and guides in order to view the Falls to better advantage.

This course, it was considered, was substantially in harmony with that pursued on the United States side, where charges are made for the use of the inclined railway and for visiting the "Cave of the Winds." In any comparison made with the American portion of the Park system it should be borne in mind that the conditions under which the New York State Reservation was acquired differed very materially from those which prevailed in the acquisition of the Canadian Park. In the former the cost of the lands expropriated became a charge against the revenue of the State of New York, and all the lands were practically handed over to the Board of Commissioners as a gift from the State for the purposes of a Park, and in addition the Legislature authorized the payment to the Commissioners of an annual appropriation of $20,000 from the funds of the State for the maintenance of the Reservation, which amount was increased subsequently to $25,000.

In the case of Ontario, as has been shown, the lands were not acquired by moneys provided by the Province, but by the sale of bonds issued on the security of the Park property, the principal and interest, however, being guaranteed by the Province. From the first it has been considered a *sine qua non* that the interest and the sinking fund, as well as the cost of protection and maintenance of the property should be provided for out of revenues to be obtained from visitors to the Park. The necessity, therefore, to collect tolls in the Ontario Park became more imperative than in the New York Reservation. In preparing a tariff of tolls, the Commissioners were guided by the following considerations:—(1) To raise the required revenues exclusively from tolls for the use of artificial constructions and appliances, or as compensation for the services of guides required to better enable visitors to view and enjoy certain points of special interest; (2) To assimilate as far as practicable the system of levying tolls to that prevailing in the New York Reservation, and (3) To give full effect to the policy that the Park grounds, with all the privileges thereof (except especial appliances or guides, before referred to) should be open and free to the public without charge.

The amount of revenue which had to be collected annually, in order to meet the financial requirement, was estimated to be as follows:—

Four per cent. on $525,000 bond issue	$21,000
Sinking fund of one per cent. per annum	5,250
Cost of protecting and maintaining the property	15,000
	$41,250

Based upon the estimated number of visitors that would enter the Park these tolls would amount to an average charge of from sixteen to twenty cents for each visitor.

Believing that the general public would appreciate the efforts of the Commissioners to reduce to the lowest possible figure the cost of seeing the varied natural attractions at the Falls, and would cordially respond, by a largely increased patronage, to the effort to realize from the moderate charges proposed sufficient revenue for all the necessary purposes of the Park, the Commissioners framed the following tariff of tolls, which was duly approved by an Order in Council :—

1. Entrance of carriages and persons on foot.....Free.
2. Pedestrians on islands .....10 cents.
3. Carriage drawn by two horses over islands .....50 "
4. " one " .....25 "
5. Each visitor under the Falls supplied with dress.....50 "
6. " " without dress .....25 "

Of these tolls the only one that has been adversely criticised, and the only one, therefore, which calls for special explanation, is that made for the use of the bridges connecting the islands in the south half of the Park. In justification of this charge, it may be stated that the Park might have been terminated at the south end of Cedar Island, a few hundred yards above Table Rock, thus effecting a saving in the capital outlay for the acquirement of land of considerably over $100,000, with a corresponding reduction in the cost of maintenance. In order, however, to afford visitors perfect views of the American and Horse Shoe Falls, and of their unrivalled setting from every possible coign of vantage on the Canadian side, and at the same time provide in full view of the Falls sufficient area for the picnic and pleasure grounds essential for the enjoyment and recreation of the vast numbers of visitors, the Commissioners decided to acquire the additional territory including the Dufferin Islands.

It must be admitted by every discerning and appreciative visitor to Niagara that for the elements of tranquil beauty, charming variety of land and water scape and extraordinary wealth of rare flora the Dufferin Islands are simply unrivalled. The impressions borne in on the mind by contemplating from these islands, the grandeur and power of the river in its wild descent from smooth water to the verge of the Fall have been thus eloquently described by the Duke of Argyle :—

" When we stand at any point near the edge of the river and look up at the course of the stream the foaming waters of the rapids constitute the sky line. No indication of land is visible, nothing to express the fact that we are looking at a river. The crests of the breakers, the leaping and the rushing of the waters, are still seen against the clouds as they are seen in the ocean when the ship from which we look is in the trough of the sea. It is impossible to resist the effect on the imagination. It is as if the fountains of the great deep were being broken up and that a new deluge were coming on the world. The impression is rather

increased than diminished by the perspective of the low wooded banks on either shore running down to a vanishing point and seeming to be lost in the advancing waters. An apparently shoreless sea tumbling toward one is a very grand and a very awful sight. Forgetting then what one knows, and giving oneself to what one only sees, I do not know that there is anything in nature more majestic than the view of the rapids above the Falls of Niagara."

Reverting to the question of revenue, it was soon found on the opening of the Park, that although the number of visitors entering the gates was considerably in excess of the number previously estimated, the amount of the revenues received under the tolls above referred to did not exceed on the average two and one-half cents for each visitor. The smallness of this revenue, and its utter insufficiency for the purposes intended, was a matter of regret to the Commissioners, and at first seemed almost inexplicable. It appeared, however, that a somewhat similar experience had followed the opening of the New York State Reservation; and the cause was doubtless largely due to the methods of doing business that prevailed with the owners of bazaars and other attractions allied with the hack and livery men. Under this combination, visitors were induced to go to those establishments, in preference to, and if possible, before entering the Park; the hackmen being paid large commissions on the sales of fancy goods and for the patronage they brought to the owners of the bazaars and other attractions. It was found that fully one-half of the visitors to the Canadian Park entered the gates in carriages, and might fairly be assumed to be generally of the classes in more or less comfortable circumstances, who could be reasonably expected to pay the trifling fees exacted for the use of the appliances provided for seeing and enjoying to the utmost the infinite beauty and grandeur of the Falls and the varying loveliness of the upper reaches of the Park, especially when it is borne in mind that from these classes very large revenues were collected by the owners of the property prior to the establishment of the Park.

After two years' experience of these most unlooked for results, the Commissioners were forced to admit that, even under improved conditions, the sources from which the revenues were drawn would prove altogether inadequate to meet even the annual cost of maintaining the Park, without taking into account the amount required for the payment of annual interest and sinking fund on the debentures. It, therefore, became imperative that new sources of revenue should be devised, unless the cost of maintenance and improvement was to be, to a large extent, assumed by the Province. The Superintendent was, therefore, authorized to make a survey of the river bank, with a view to locating a line of electric railway which would connect, at Queenston, with the steamers of the Niagara Navigation Company for Toronto and points on Lake Ontario, and on the south, with navigation on the upper reach of the Niagara River between Chippawa, the

City of Buffalo and Lake Erie points; and connecting with the Grand Trunk Railway at the Suspension Bridge. The Commissioners believed that a line of electric railway forming connections with these main avenues of travel and opening up to visitors near views of the whole course of the river, with all its unrivalled wealth of scenic effect, would be a most valuable franchise which capitalists would pay something to secure.

Apart altogether from the question of revenue, it became apparent from the first opening of the Park that more convenient transport should be provided to all parts of the grounds from the Grand Trunk Railway Depot, at which nearly all the large excursions to the Falls from points in Canada disembarked. The street railway of the town did not approach nearer than a mile to the Falls at any point where entrance could be had to the Park; and its equipment, at best, was quite inadequate for handling the large excursions coming from all parts of Canada and the United States. The number of cabs was too limited, and to most of the excursionists, too expensive. The distance from the Grand Trunk Depot to Table Rock is two and a half miles, and to the Dufferin Islands three and a half miles, and as excursionists are generally accompanied by a large number of children and are also frequently encumbered with baskets, walking such a distance was attended with great fatigue and discomfort; and one trial was usually sufficient to deter them from attempting another expedition in the same manner.

It was also found that organized efforts were made by the owners of bazaars, and other attractions on the American side, to capture any excursions booked for the Canadian Park. Agents were invariably sent to meet the special trains conveying these excursions for the purpose of selling coupon tickets for admission to a number of the so-called points of interest, including bazaars and restaurants. In addition, substantial inducements were freely offered to the promoters of the excursion to entice the whole party to the American side. The large profits made on the sales to members of these excursion parties enabled the owners of these places to subscribe liberally to the funds advanced for this purpose. Even those crossing Lake Ontario by steamer from Toronto, or elsewhere, found it much more convenient to take the observation trains of the New York Central Railway, at Lewiston, which afforded partial views of the lower reach of the gorge, and landed the excursionists within a few minutes' walk of the Park and river on the American side. For these and other reasons it was found to be in every way most desirable that the electric railway should be built, and immediate attention was, therefore, given to the project; and as the first step, the right of way was secured where the lands vested in the Commissioners were not sufficient for the proposed road. After several offers had been made to dispose of the franchise, a contract was ultimately entered into with Messrs. Osler, Hammond, Hendrie and Angus, on behalf of a number of prominent Canadian capitalists, for the construction and

The Dufferin Islands, Queen Victoria Park.

Riverside Ramble, Dufferin Islands, Queen Victoria Park.

operation of a line of electric railway through the Park and to Queenston and Chippawa, the Commissioners providing the right of way over nearly the whole of the distance, and furnishing all the water power necessary for the developing of the electricity to operate the line.

Under the terms of the agreement entered into with these capitalists, the sum of $10,000 a year is secured for the Park revenue by way of rental. Early in 1892 the construction of the line was begun, and the work was sufficiently advanced to permit of the opening of the road, as a single track railway, on the 24th of May, 1893. The construction throughout is of a very substantial character, and the electrical and rolling stock equipment fully up to the requirements of the agreement. The success which attended the operating of the line from the first, convinced the Company that safety and convenience required them to double track the road throughout. To that end negotiations were entered into with the Commissioners, and after very careful consideration of all the circumstances governing the case, an agreement was ultimately arrived at by which, in consideration of certain specific works to be performed by the Company, the laying of a second track was authorized, and the Company was able to have the work completed in time for the heavy midsummer travel of 1894. By the opening up of this route abundant provision has been made for the convenience of the visiting public of all classes; and the sublime panorama of Niagara in all its diversified scenic aspects, along its entire length, is opened up to view with every possible convenience for the tourist and at a trifling expense.

In addition to the electric railway, the Commissioners sought other means of raising revenue. They accordingly obtained the sanction of the Government to the granting of a franchise for the use of a portion of the enormous water power of the Falls for commercial purposes. It has been estimated that the total amount of power represented by the waters of Niagara falling over the cataract into the gorge below is equivalent to over four and a half millions of horse power, and the Commissioners considered that a small portion of this enormous power could be taken for commercial purposes without perceptibly affecting the flow of water over the face of the Fall, or necessarily interposing any objectionable features upon the landscape. This course appeared to them to be the more justifiable as operations had been begun by an association of wealthy capitalists on the American side, having in view the taking of the waters of the river on a large scale for generating electric and water power for use in the town, and for carrying it to Buffalo and other places to supply users at a distance.

After negotiations with well known engineers and capitalists in both New York and London, England, extending over a considerable period, an agreement was ultimately entered into on the 7th of April, 1892, by which Messrs. Shaw, Stetson and Rankine, all of New York State—undertook, on behalf of themselves

and others, to carry out the work ; and, as a guarantee of good faith, paid the Commissioners an amount, equivalent to two years' rental, in advance. This agreement was approved by the Government and confirmed by an Act of the Legislature, (Chapter 8, Vic. 55) under the terms of which the Company is authorized to take water from the Niagara River at the south end of Cedar Island through the extension of the natural channel forming the island, and to utilize the same for generating electric or pneumatic power, in buildings to be constructed at the foot of the high bank bounding the park—the spent water to be taken off by means of tunnels cut through the rock to a portal situated in the gorge near the foot of the Falls, substantially as is done by the Company operating on the American side.

The plans of all works required in the carrying out of the enterprise are to be submitted to, and approved by, the Commissioners before being authorized ; and all the power generated is to be transmitted for the use of customers without the park, and to points more or less remote. The agreement is for a period of twenty years, with the right of renewal for four further periods of twenty years, or one hundred years in all. For these privileges the Commissioners are to be paid $25,000 per annum by way of rental for the first ten years, the amount increasing $1,000 each year during the second period of ten years, and then continuing at the rate of $35,000 per annum until the end of the period for which the franchise is granted. The Company has the right of terminating the lease at any time during the first period of twenty years by giving three months' notice. Work is to be commenced on or before the 1st of May, 1897, and to have proceeded so far that by the 1st of November, 1898, there will have been completed, water connections for the development of 25,000 horse power, and have actually ready for use 10,000 developed horse power of electric or pneumatic power. Every precaution has been taken in the agreement to conserve to the utmost the natural features of the park ; and advantage will be taken of the changes in configuration necessitated by the carrying out of the work to improve and develope this hitherto neglected portion of the park property. The approval of the Commissioners has been given to the preliminary plans submitted by the Company ; but up to the present time the actual works of construction have not commenced.

As a third source of revenue the Commissioners decided to have the large stone building, which, prior to the establishment of the park, was used as a museum, fitted up as a restaurant, and also to provide much needed shelter during inclement weather for the largely increased number of visitors brought to the Park by the electric railway. It was also decided to combine with the restaurant franchise, the business of conducting visitors " Under the Falls" which had been carried on by the park staff for some years, and also the photo privileges in connection therewith, which had been under lease for some years. Upon

advertising for tenders the offer of Messrs. Zybach and Brundage was accepted; and an agreement entered into by which the work of repairing and fitting up the restaurant building and Table Rock House was put under way. This agreement provides for the payment of a rental of $8,200 per annum and extends over a period of ten years from the 1st of June, 1893, with the right of renewal for another ten years at a rental to be agreed upon, or settled by arbitration

Owing to the unavoidable delays incurred in connection with the closing of these three important revenue-producing undertakings, and having regard to the continued inadequacy of the park receipts to meet the large expenditures necessarily incurred in providing for the interest on bonds, the maintenance of the Park and the works of improvement, as well as to provide funds for the purchase of properties found to be essential to the completion of the park system, it was found expedient to make a further issue of bonds to the extent of $75,000, making the total bonded indebtedness of the property $600,000.

Reference has already been made to the Chain Reserve along the west margin of the Niagara River, part of which, lying in the townships of Stamford and Niagara was granted to the Commissioners in April, 1888. In addition to this reserve, there is a strip of one chain, or 66 feet in width, from the high water mark reserved in nearly all the original patents granted by the Crown to lands fronting on the Niagara River in the Townships of Bertie and Willoughby, and extending from the Military Reserve at Fort Erie down to the mouth of the Welland River at Chippawa, a distance of nearly sixteen miles. A similar reservation was also made in all patents to lots fronting on the river in the township of Niagara from the Military Reserve at Queenston to the Military Reserve at Niagara on the Lake, a distance of nearly six miles. These several reserves were vested in the Commissioners by grant under the Great Seal of Ontario on 20th October, 1891. This very extensive addition of territory still further enlarged the scope of the duties of the Commissioners; and in order to obtain data on which to base a policy for its incorporation and maintenance, as a part of the park domain, the superintendent was instructed to make an examination and to report on the whole subject of the Chain Reserve. His report was as follows:—

"J. W. Langmuir, Esq., Chairman of the Park Commission:

"Sir. Acting under your instructions I have made an examination of the Chain Reserve along the west bank of the Niagara River, through the townships of Bertie, Willoughby, Stamford and Niagara, and beg to make the following report thereon:

"This property was vested in the Commissioners by the Government of Ontario under the authority of the Legislature, by the following acts, viz:

"A. Order-in-Council, approved on the 15th day of July, 1887.

"B. Grant under the Great Seal of the Province, dated 26th April, 1888.

"C. Grant under the Great Seal, dated 26th October, 1891.

'For convenient reference the full text of these documents is embodied herein.

A

"Copy of an Order-in-Council, approved by His Honor the Lieutenant-Governor, the 15th day of July, 1887.

"The Committee of Council have the honor to report for the information of your Honor, that by the 'Queen Victoria, Niagara Falls Park Act, 1887, it was provided that the Lieutenant-Governor in Council may vest in the Commissioners, to be held for the purposes of the park, any part or portions of the Crown Lands, the property of Ontario, lying along the bank of the Niagara River, and not included in the original survey of lands laid out in the townships of Stamford and Niagara, and that the Commissioners have applied for a grant to be made to them accordingly of the following Crown Lands, the property of Ontario, viz:

"The land beginning at the north boundary of the Park, opposite the Clifton House, and lying in front of lots numbers 129, 128, 111, 110, and 93, in the Township of Stamford, subject to the Military Reservation of one chain in width on the edge of the cliff.

"Also the land in the said Township lying in front of lots 92, 75, and broken front of 74, and broken front of 59, and the land in the front of numbers 41, 40, 21, 20 and 1, and the land lying between number 1 and the Township of Niagara, known as the Gore or cross concession in Stamford.

"Also the land in front of lots 1, 2 and part of 3, fronting on the Niagara River in the Township of Niagara, as far down as Queenston.

"The Committee recommend that Your Honor do vest the said lands in the said Commissioners, as prayed to be held for the purposes of the said Park, and subject to the condition that compensation shall be made to any persons legally or equitably entitled thereto, in respect of any of the lands so vested.

"Certified,

"(Signed) J. LONSDALE CAPREOL,

"Assist. Clerk Executive Council."

B.

"Copy of Grant under the Great Seal of the Province of Ontario, dated 26th day of April, 1888.

"A. CAMPBELL, Province of Ontario."

"Victoria by the Grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, etc., etc., etc.

To all to whom these presents shall come:

"GREETING: Know ye that we, of our special grace, certain knowledge and mere motion have given and granted, and by these presents do give and grant unto the Commissioners for the Queen Victoria Niagara Falls Park, in fee simple,

all those parcels or tracts of land situate in the Township of Stamford in the County of Welland, and in the Township of Niagara in the County of Lincoln, in our said Province, being composed of all these pieces or strips of land which lie along the bank of the Niagara River, in the Township of Stamford and County of Welland between the lots hereinafter mentioned and the river. Beginning at the north boundary of the Park opposite the Clifton House, and lying in front of lots number 129 and broken front of 129, and numbers 128, 111, 110, 93, 92, 75, broken front of 74, broken front of 59, number 58, broken front of 58, broken front in front of number 41, numbers 40, 21, 20 and 1 of the said Township of Stamford, and the cross concession or Gore in Stamford, and those pieces or strips of land which lie along the bank of the River Niagara, in the Township of Niagara in the County of Lincoln, in front of surveyed lands in front of lots numbers 1, 2, and 3 of the said Township as far as the Town of Queenston.

"Given under the Great Seal of our Province of Ontario.

"Witness the Honorable Sir Alexander Campbell, Knight Commander of our Most Distinguished Order of St. Michael and St. George, a Member of our Privy Council of Canada, Lieutenant-Governor of our said Province of Ontario.

"At Toronto, this twenty-sixth day of April, in the year of our Lord one thousand eight hundred and eighty-eight, and in the fifty-first year of our reign.

"By command of our Lieutenant-Governor in Council.

"(Signed) ARTHUR S. HARDY, (Signed) AUBREY WHITE,
"Secretary. Assist. Com. Crown Lands."

C.

"Copy of a grant under the Great Seal of Ontario, dated the 26th day of October, 1891.

"A. CAMPBELL, Province of Ontario."

"Victoria, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, etc., etc., etc.

To all to whom these presents shall come:

"GREETING: Known ye that we of our special grace, certain knowledge and mere motion have given and granted and by these presents do give and grant unto the Commissioners of the Queen Victoria Niagara Falls Park, all those parcels of land in the Townships of Bertie and Willoughby in the County of Welland, and in the Township of Niagara in the County of Lincoln.

"First, Being composed of all those pieces or strips of land which lie along the bank of the Niagara River, situate in the Townships of Bertie and Willoughby and County of Welland in the Province of Ontario, being composed of those portions of land fronting on the Niagara River, and extending from the Garrison

Road in the Village of Fort Erie to and including lot number 22 in the second concession of the Township of Willoughby, lying between those portions of lots heretofore granted by Letters Patent from the Crown and the water's edge of the River Niagara.

"Second, All those pieces or strips of land which lie along the bank of the Niagara River and County of Lincoln in said Province of Ontario, being composed of those portions of land fronting on the River Niagara, commencing at the intersection of the northerly angle of the Military Reservation at Queenston on lot number 5, broken front concession in the Township of Niagara with a point within one chain of the waters of the Niagara River, as referred to in the Letters Patent to Elijah Phelps, bearing date the 1st day of July in the year of our Lord one thousand seven hundred and ninety-nine, to and including a certain tract above Navy Hall, patented to Wm. McClellan on the 10th day of June, in the year of our Lord one thousand eight hundred and one, lying between those portions of the lots heretofore granted by Letters Patent from the Crown and the water's edge of the Niagara River.

"Given under the Great Seal of our Province of Ontario.

"Witness the Honorable Sir Alexander Campbell, Knight Commander of our Most Distinguished Order of St. Michael and St. George, a Member of our Privy Council of Canada, Lieutenant-Governor of our said Province of Ontario.

"At Toronto this 26th day of October, in the year of our Lord one thousand eight hundred and ninety-one, and in the fifty-fifth year of our reign.

"By command of the Lieutenant-Governor in Council.

"(Signed) J. M. Gibson, (Signed) Arthur S. Hardy,
"Secretary. Commissioner of Crown Lands."

"The Chain Reserve referred to in these several documents consists of a strip of land one chain in width, which was, with some exceptions, reserved in all the patents issued by the Crown for lands fronting on the Niagara River, and was doubtless intended originally for a convenient roadway or portage to the broken water travel from Lake Ontario to Lake Erie, and also to form a suitable and direct means of communication between the various Military Reserves along the river, including Fort Erie, Chippawa, Queenston and Niagara. In fact, such a roadway exists along the water's edge in front of Bertie and Willoughby Townships, or from Fort Erie down to Chippawa.

"In Stamford Township the reserve was made along the edge of the river down to the brink of the Falls, and below the Falls is described as extending from the edge of the cliff or upper bank of the river, leaving a talus or slope of considerable width between the chain reserved in the patents and the edge of the water.

"Along the Chain Reserve proper a road way has been constructed for a considerable distance, chiefly in front of the Town of Niagara Falls; but with the exception of this reach, and of some short pieces within the limits of the Queen Victoria Niagara Falls Park grounds, there is now no roadway in existence. Early in the century a roadway was made upon the river bank from the old Chippawa Military Reserve northwards for some distance, but it was abandoned many years ago, and the fee simple of the Chain Reserve over this portion disposed of to private parties.

"In Niagara Township and in the Gore of Stamford the reserve is described in the original patents as 'A chain in width from the water's edge' or 'from the river.' Owing to the height and sloping character of the river bank, this reach is practically useless for the purposes of a road way.

"In the accompanying maps I have indicated by green coloring all the property which has been vested in the Park Commissioners; and by a reference thereto and also to the enlarged plans of those portions to which I desire to make more particular reference, a good general conception may be had of the character and extent of the territory in question.

"Beginning at the southerly limit of township lot 2 in the front concession of Bertie, the patents reserve an unbroken strip one chain wide throughout the whole of the township, upon which, as before stated, there is a travelled roadway.

"In front of the Village of Fort Erie there has been an accretion to the Chain Reserve of considerable extent, doubtless owing, in a measure, to the railway companies filling in the fore shore for depot purposes. This accretion has evidently caused a good deal of confusion, as both the Dominion and Provincial authorities have exercised jurisdiction and granted titles to portions thereof since the Confederation of the Provinces in 1867.

"On reference to plan 'A' it will be seen that a large part of this made ground has been disposed of by the Dominion Government to various parties, *vide* reference numbers 3, 4, 5 and 9, and a lease made the 29th May, 1885, for twenty-one years for parcel numbered 6 to the village of Fort Erie, while the Crown has, at various times, disposed of parcels 1, 2, 7, 8 and 10. It will be observed that parcel 8, patented by the Crown in 1865, was included in a sale by the Dominion Government as Ordnance property in 1888. The Erie and Niagara Railway Company, patentees under the Dominion Government, afterwards (23rd May, 1888) secured title to parcel 8 from the patentees under the Crown.

"The right of the Dominion Government to deal with this property may well be questioned, especially since the decision of Chancellor Boyd in the case of the Park Commissioners *vs.* Howard.

"It is greatly to be regretted that in granting titles to these properties the Dominion Government did not reserve therefrom the extensions of the village streets, so as to afford to the public free and untramelled access to the water-way at these points. Should it be deemed necessary to grant new titles under proper authority, instead of the existing ones, I would respectfully suggest that such reservation be made therein.

"A short distance down stream from the village of Fort Erie, where the International Bridge crosses the river, there are three properties which have been disposed of by the Crown Lands Department. These are shown on plan 'B,' and do not call for extended comment. The west abutment of the International Bridge was built upon the original Chain Reserve, and some filling in done on the river side to pass around it. When the patent for water lot was afterwards issued, it does not appear that the railway company was required to fully compensate for the encroachment by grading out a chain in width in front of the abutments.

"A water frontage was disposed of in 1861 in front of parts of township lots 8 and 9 of Bertie, comprising 1 9-10 acres, which is not shown on the plan. An old wharf exists at the spot, which is memorable as being the principal landing place of the Fenian invasion of 1866.

"There are two natural-gas pipe lines which have been granted a license of occupation upon the Chain Reserve—one being the Provincial Natural Gas and Fuel Company, dated August 31st, 1891, and the other on the same date to William E. Carroll and Samuel Carroll. These licenses are during the pleasure of the Crown, and each one authorizes the laying of gas pipes in a strip of land five feet in width upon or over the Chain Reserve in front of lots 5, 6, 7, 8, 9 in first concession of the township of Bertie.

"The above described properties apparently embrace all of the Chain Reserve or of the water frontage thereof within the township of Bertie that has been dealt with or disposed of by the Crown or by the Dominion Government.

"About a mile and a half up stream from the southerly extremity of the lands now appertaining to the Commissioners and within the corporate limits of the village of Fort Erie, stands the ruins of the old fort, which played such an important part in the war of 1812.

"About twelve years previous to the American revolution, or over 130 years ago. General Bradstreet built a substantial block house and barracks on the lake shore, near to the site of the present ruins, for the protection of the traffic of the upper lakes, as it was the place where the King's and merchant vessels assembled to take in and discharge their lading. These buildings appear to have remained intact until the spring of 1779, when a severe storm on the lake undermined the foundations to such an extent as to imperil their safety. After many attempts at repair and successive damage by storms, these works were aban-

Picnic Grounds, with Statue of Sir Cassimer Gzowski, Queen Victoria Park.

Picnic Grounds Pavilion, Queen Victoria Park.

doned. The Imperial authorities in 1804 gave instructions for the commencement of masonry works in a more secure situation, and these were completed and occupied before the breaking out of hostilities in 1812.

"On 27th May, 1813, the fort was dismantled and abandoned by the British forces and taken possession of by a detachment of United States troops under Colonel Preston and held until the 9th of June of the same year. On 3rd July, 1814, it was again surrendered to the American forces, who held it until November 5th, when it was finally blown up and evacuated.

"Since that time the works have been given over to spoliation. Large quantities of stone have been taken away by all and sundry, and many of the foundation walls of buildings in the vicinity are built of these stones. Year by year the ruins are being searched for relics of the battles fought for its possession, and excavations have been made in many places for a treasure traditionally supposed to be buried at some point within the enclosure.

"Some years ago the village authorities secured a lease of the grounds from the Militia Department, but nothing whatever has been done to enclose them or to put a stop to the operations of the despoiler.

"Originally the reserve contained about 1,000 acres, but all of this has been disposed of with the exception of seventeen and a half acres contained in a sector-shaped parcel about the site of the fort.

"It is not right that one of the defences of our country in time of danger should be so utterly neglected when a comparatively small outlay from year to year would effect its preservation, and I take the liberty of suggesting that application be made to the Dominion Government for the vesting of this interesting piece of property in the Commissioners.

"In the township of Willoughby, adjoining Bertie on the north, the Chain Reserve does not extend all the way, but is broken at several places, as shown by uncolored spaces on the plan. At these breaks there is no Chain Reserve, patents from the Crown conveying in some cases the land down to the edge of the water.

"There is a roadway in existence along the water's edge, even where the land is so deeded, but it cannot be considered as part of the lands vested in the Commissioners. There does not appear to be any transactions on record alienating or otherwise affecting any portions of the lands which were originally reserved in the township of Willoughby.

"Throughout almost the whole course of the river in Bertie and Willoughby townships there has been a serious erosion of the shore, chiefly caused by high water during storms scouring away the clay banks of the river. This erosion has been going on from year to year, and at the present time the fences on the westerly side of the roadway are within a few feet of the water's edge—in fact, so close in many places that two vehicles can barely pass each other, and for

long reaches the fences have been moved back from time to time on to the lands of the adjoining proprietor, so as to have a margin of ground along the shore that travel might be carried on.

"Many of the farmers complain that they have been obliged to move their fences back frequently, in order to leave a roadway at all, and an examination of the ground clearly shows this to be the case, evidences of the fence lines at successive periods being quite visible at certain points which are now encroached on by the roadway. Some of these land owners claim that the recession of the river has been fully four rods, or one chain, during their occupation of their farm, and they feel sorely on the subject. Attempts have been made to stay the erosive action by building low retaining walls of stone along the water's edge. Planting trees has also been tried, and in each case with a certain amount of success; but it is claimed that it is the duty of the Government to afford relief, as it is the Government property which is principally concerned. Some proprietors state that they will not continue the moving-back process, but call upon the owners of the roadway to protect themselves.

"Certainly something should be done, and that on a comprehensive scale, to confine the river to its present limits. A large sum would not be required in order to test the expediency of any measure of protection proposed. In one or two instances the proprietors have tried to obtain compensation for the land lost in front by exacting an equal amount at the rear of their properties; but it is needless to say that such a course did not meet with the approval of their neighbors whose land was thus sought to be appropriated.

"I would respectfully suggest that it may be worthy of consideration whether or not it would be advisable to acquire by purchase or otherwise those portions of the Chain in width along the margin of the river which were not reserved in the original patents from the Crown, and thus secure for all time the ownership of the whole of the frontage on the river between Fort Erie and the mouth of the Chippawa.

"On a reference to the plan accompanying this report, it will be seen that the outline of the river, and consequently the Chain Reserve, appears to cover land not specifically mentioned in the patent to the Commissioners of the Reserve in Willoughby township. The original map of this township does not show correctly the lands near the mouth of the Chippawa Creek or Welland River, and some confusion has resulted in consequence. The discrepancy may be more clearly seen in reference to plan 'C,' where the lot lines as indicated in the original township map are shown in contra-distinction to the existing shore line of the river, which, indeed, appears to be very considerably outside of the limits covered by the original map, and as it is wholly improbable that an accretion to the land has taken place at this point since the original surveys, it would seem to be a clear case of gross inaccuracy in the official map.

"The original patents granted for the lands in question described by metes and bounds the outline of the property as now existing, and they contain a clause reserving one chain along the whole of the river frontage to the mouth of the Chippawa.

"From an inspection of the map accompanying this report it will be observed that there is no reserve shown along the bank of Niagara north of Chippawa Creek (or Welland River) for a considerable distance, in fact until the Queen Victoria Niagara Falls Park is reached. In the original patents there was a chain reserve along this portion, but in 1816 it was granted in fee simple to one Colonel Thomas Clark, and the roadway then upon it was diverted some distance inland, and carried in a straight line from the old Bridgewater Mills to the Village of Chippawa.

"The construction of the line of electric railway between the park and Chippawa necessitated the acquiring of a right of way for the roadbed, and a strip of land twenty-eight feet wide was secured by the railway company for this purpose; and as the railway is located parallel with the shore, and not far from it, an excellent view of the river is afforded to its patrons. As the proprietors of the lands adjoining contemplate the opening of a driveway alongside of the railway, doubtless this may be considered a sufficient approximation to the public ownership of a reserve, and at the same time harmonize with the desire for an open thoroughfare.

"The park proper embraces the shore line for some two and a half miles, and of course covers the Chain Reserve over this distance, although a considerable portion of it has been alienated by the sale to Colonel Clark before alluded to. The whole extent of the park proper, including the chain along the margin of the river and that portion of the talus which lies south of the Clifton House is 154 acres. These lands were vested in the Commissioners as trustees for the Province by Act of the Legislature of Ontario, 50 Victoria, chapter 13.

"Several important franchises have been granted since the establishment of the park by the Commissioners, all of them having to do with the original Chain Reserve, at one point or another within the park limits. It will not be necessary in this report to enlarge upon the rights created under the agreements covering these franchises, as they are all familiar to the Commissioners and are well understood. They may, however, be enumerated, and in order of precedence are as follows, viz.:

"A. The perpetual right granted Sutherland Macklem, under his deed, of pumping water for household and general use at Clark Hill, together with the intakes, flumes, drainage, machinery and lands required and at present used for that purpose. This right is without compensation.

"B. A lease to the Town of Niagara Falls for ten years from 1st September, 1889 (renewable for a second period of ten years under certain conditions), of the right to take water from the river for town purposes, with certain defined stipulations as to buildings, flumes, tunnels, etc. The consideration is a pepper corn rental of five cents a year.

"C. The railway franchise executed on December 4th, 1891, and approved of by Act of the Legislature of Ontario, April 14th, 1892. This franchise covers the right to construct a first-class electric railway with single or double tracks, as may be agreed upon by the Commissioners and the Company, in and through the park proper, from its southern to its northern boundary, and on over the Chain Reserve or other lands of the Commissioners to Queenston, together with the right to all necessary erections, tunnels, etc., etc., for motive power, machinery and appliances.

"The compensation to be paid for the franchise, which covers the extension of the line to Queenston, is ten thousand dollars per annum, and the agreement is for a period of forty years from September 1st, 1892, with certain rights of renewal for a further period of twenty years. Attached to this agreement is a provision for the construction of a line of railway along the water's edge in the gorge below the Falls, from the Park to Queenston, if agreed upon between the Commissioners and the railway company within five years from the date of agreement. The additional rental to be paid for this privilege is seven thousand five hundred dollars per annum, and the period to run concurrently with the high level line.

"A single track railway with crossings has been built through the park and to Chippawa and Queenston, upon the Chain Reserve. This was opened for traffic on the 24th of May, 1893. The Commissioners have not called upon the railway company to construct the low level line under the terms of the agreement.

"D. The franchise granted the Canadian Niagara Power Company under agreement dated 7th April, 1892, and approved by Act of the Legislature, 14th April, 1892.

"This is a license to take water from the Niagara River to supply works for the generating of electricity or pneumatic power on a large scale, and provides for all necessary buildings and appliances for that purpose. The license is for twenty years from 1st May, 1892, renewable for four additional periods of twenty years at the option of the company. The company may also terminate the lease at any time during the first period of twenty years on giving three months' notice.

"The rental payable under the agreement is $25,000 per annum, for the first ten years, computing from 1st November, 1892, and increasing by an additional sum of $1,000 per annum for the second period of ten years, and $35,000 per annum thereafter, work to be commenced on or before the 1st May, 1897. Nothing has been done by the company up to date.

"E. Zyback & Co.'s lease of the elevator and 'Under the Falls' business, together with certain restaurant privileges. This agreement bears date 6th June, 1893, and is for a term of ten years, at a rental of $8,200 per annum, renewable for another period of ten years at an amount to be agreed upon or fixed by arbitration.

"In addition to these franchises the 'Maid of the Mist' Steamboat Company holds a portion of the shore and talus at the ferry landing, and within the original park limits, under tenure from the Town of Niagara Falls, which in turn holds by virtue of a Dominion License of Occupation, and, it is claimed, under a provincial license as well This case appears to be a somewhat intricate one, and presents difficulties which I am unable to determine with any degree of assurance. The facts appear to be as follow:

"On the 27th May, 1862, the Commissioner of Crown lands for the Province of Upper Canada issued a license of occupation to the municipal council of the Town of Niagara Falls of the Chain Reserve and the strip of land lying between the reserve and the water's edge of the river in front of the town, reserving therefrom the macadamized road of the toll road company and certain privileges previously granted near the Table Rock. Under this license of occupation the town authorities sub-let on June 14th, 1884, to Messrs. Carter and LeBlond, the owners of the little steamer 'Maid of the Mist,' a strip of land lying between the eastern edge of the macadamized road and the water's edge, and extending southerly along the bank a distance of sixteen hundred feet from the upper Suspension Bridge.

"On March 27th, 1885, the town authorities, evidently concluding that the property held under this license was not the property of the Province but was Ordnance lands, took a lease from the Dominion Government, and on the 27th April, 1887, executed a new sub-lease to Carter and LeBlond, confirming the one of June 24th, 1884, but restricting the land leased to about one acre only, at the ferry landing, as shown on Plan D herewith.

"On the 4th November, 1890, the Dominion surrendered whatever rights it had or claimed to these lands, with others, to the Park Commissioners, and as its lease to the town (27th March, 1885) was during pleasure only, presumably the Commissioners have, under the surrender, full powers to deal with the case. The license of 1862, from the Commissioner of Crown lands, does not appear to have been formally cancelled, but the town by its action practically renounced the authority of the Province in the premises; and therefore it cannot well be revived in their favor. In either case the Park Commissioners would appear to have full powers, and it might be well, in order to remove all misapprehension, to consider the granting of a new lease under such terms as may be deemed just and reasonable in the circumstances.

"North of the park proper the Chain Reserve follows in general the line of the high rocky wall forming the bank of the river. For over two miles the Chain Reserve lies within the limits of the Town of Niagara Falls, and forms the frontage thereof. Between the reserve and river there is a talus s'oping down to the water's edge, averaging some two hundred feet in width, forming part of the reserve. North of the Park the line of the electric railway is located upon the Chain Reserve, as near to the edge of the bank or easterly side of the reserve as could be; due regard being had to safety and to the alignment of the railway. Under the agreement with the railway company right of way for a double track is provided, and in order to furnish room for an additional line of rails, and at the same time have abundance of space for vehicular and pedestrian travel over the roadway on the reserve, it becomes necessary to examine carefully into the question of encroachments.

"There has been a general tendency manifested by property owners in the town, whose limits extend to the reserve, to 'crowd' over the fences on the west side, and in the case of the 'Clifton House' the encroachment is very apparent. In fact this is one of the most objectionable of the many cases which come up for consideration, as it is in the line of the greatest travel, viz, between the upper Suspension Bridge and the Park. Not only does the large promenade verandah, which runs along the east side of the hotel, extend out on to the Reserve at the north end, but nearly fourteen feet of the building itself is at one point projected out beyond the correct line. This encroachment seriously narrows in the driveway at this point, and steps should be taken without delay to afford at least some measure of relief to the carriage travel. The shed for omnibuses also encroaches very considerably.

"The case of the Upper Suspension Bridge requires explanation. On the 28th January, 1873, Letters' Patent were issued by the Dominion Government to the Clifton Suspension Bridge Company, for a piece of land two hundred feet in length along the Reserve, and including a portion of the Reserve and the talus down to the river. The lands of the Reserve were required for the straining piers of the bridge, and over thirty-five feet of the sixty-six were patented. The patent describes the lands conveyed by metes and bounds, and these are well defined. The existing bridge structure over-reaches beyond the limits patented, the two corner posts of each of the steel towers and the stone wall enclosing them being about ten feet outside of the proper line. There is therefore very little of the 'Chain' left at this point.

"The sum of forty dollars was paid as purchase money for the lands thus patented.

"Should it be decided that title to this property must issue from the Commissioners, I would respectfully suggest that right of way for the projected Low Level Railway be reserved therein. Compensation in kind for the lands of the

Chain Reserve taken in excess of what is patented might be required from the Bridge Company on the west side of the Reserve. I may say that the holding down guys of this suspension bridge are fastened to the rocks below far outside of the lands patented, and in some instances fully 250 feet therefrom.

"Beyond this suspension bridge there are several property encroachments on the west, and one building, the bazaar of Mr. Edward Davis, is erected partly on the Reserve.

"For a considerable distance below Davis' the property is not improved, and the fences not in place, but much of the frontage is under offer for sale, and doubtless will soon pass into many hands for building purposes. It will therefore be desirable to have the limits of the Reserve properly defined in case of new structures or boundary fences being put up, as the land along the Reserve is becoming valuable, and in all probability the same process of 'crowding' will be attempted by contiguous owners.

"From Simcoe street northwards to Park street there is a continuous encroachment varying from a few feet to over twenty. Throughout the whole of this distance the rights of the property owners, as defined in the original plans of the town, appear to conform generally to the line of the Chain Reserve, as laid down in the map 'E' herewith attached, and presumably their deeds tally with the original and official plans.

"I would suggest therefore that this matter be made the subject of careful investigation, and the precise standing of the Commissioners, as regards the lands thus indicated be ascertained.

"The Cantilever bridge, officially known as the Niagara Peninsula Bridge Company, secured from the Government of Canada a license of occupation for the whole width of the Chain Reserve at the site of their bridge and down to the water's edge. The license of occupation bears date the 13th April, 1883, and requires the payment of fifty dollars a year. The description given of the lands so leased is very faulty. The quantity of land is described as three hundred and seventy-five thousand two hundred and seventy-two square feet, or equivalent to 8 60-100 acres; while the metes and bounds enclose only some 87-100 of an acre and the land as described in the patent does not embrace all the ground on which one of the main piers of the bridge is constructed. I have shown on the plan herewith the land doubtless intended to be conveyed under the agreement, and as shown on a map purporting to cover these lands, made by D. W. Gossage, D. L. S., in 1889. The area of the lands shown would be about $1\frac{1}{8}$ acres. I understand that application has been made to the Commissioners for a confirmatory title to these lands, by this Bridge Company, and I would therefore draw attention to the desirability of reserving therein the right of way needed for the Low Level Railway.

"There does not appear to be any title on file covering the occupancy of the Railway Suspension Bridge, whose towers and offices occupy nearly the whole width of the Chain Reserve at the site of their bridge; and the only reference bearing on the question of title which appears to have been discovered thus far is an entry in a book dated November, 1856, purporting to give a list of Ordnance reserves transferred to Old Canada, and which is in custody of the Crown Lands Department at Toronto. It reads:—

'Suspension Bridge Company.'

"No lease executed, 3 ac. 8 per. were authorized B.O. 28, August, 1850, to be leased to the company at £1 currency per annum. Plan and description for the lease were forwarded to the President of Company 24th July, 1851, but never returned.

The quantity of land referred to above, viz., 3 ac. 8 per would comprise a long reach of both the Chain Reserve and the talus between the Reserve and the water's edge, not less than 500 feet, and although the holding down guys securing the structure against undue vibration reach out to and beyond this distance, yet it would certainly be inadvisable to embrace such a large territory in any documentary title which the Commissioners may consider it advisable to grant.

"The £1 per year rental alluded to has not been paid.

"This bridge was first opened for ordinary traffic in August, 1848, and was replaced by the permanent structure and opened for railway and general traffic on March 25th, 1855, the steel towers and truss being substituted for stone and wood respectively some ten years since.

"A short distance below the Railway Suspension Bridge there is a brick building standing upon the edge of the bank. This was erected about 1880, by G. H. Howard and others for a flouring mill, and in connection therewith a water wheel and appliances for generating power and conducting it to the top of the bank were erected on the lands below the cliff, and at the water's edge.

"The works below were carried away by high water shortly after they were put in, but the building on the top remains, although it has not been used for many years. It is now occupied temporarily by the Electric Railway Company as a store house for materials. No title was ever had for the lands thus occupied, and the building should be removed.

"Immediately below this brick building the Grand Trunk Railway Company have had for some years a steam pumping station, the machinery of which is contained in a wood building situate at the water's edge, a rough coal box shute leading thereto from the top of the cliff above. The Grand Trunk Railway has no title to the land thus occupied. This pumping station is at present unused, as the railway receives its water supply through the town mains, and the Commissioners might consider the advisability of ordering its speedy removal.

The Lovers' Walk, Dufferin Islands, Queen Victoria Park.

The Lovers' Walk, Dufferin Islands, Queen Victoria Park.

"A short distance below this the Whirlpool Rapids' incline is situated, with buildings for offices and a fancy goods store, and a drive shed on top. There is also a long promenade platform skirting the edge of the mighty rapids below, with frame buildings at either end. This property, with its appurtenances, is covered by the Electric Railway Company's agreement, and is now under their possession and management.

"The distance from the park proper at the Clifton House to the northerly limits of the town of Niagara Falls is some two and one-fifth miles. Over the whole of this distance there is a roadway built upon the Chain Reserve, much used for driving purposes by tourists and others; and as it is an important avenue leading to the Park and at the same time the principal thoroughfare for pleasure travel in the town, this roadway should be maintained in first-class condition and made an attractive feature of the locality, as it commands a magnificent view of the river gorge and of the Falls. It is now in wretched order and quite unfit for driving purposes.

"To put this road in proper condition will entail a considerable outlay, as it requires to be macadamized the entire distance. Its subsequent maintenance, after being once properly repaired, will then be a comparatively inexpensive matter, as the travel is chiefly of a light character.

"For many years a portion of this roadway was in the hands of a toll road company, and tolls were exacted from all vehicles passing over it. In the year 1888 the rights of the proprietors in this toll road were purchased by the Commissioners; and the tolls charged for use of the road, upon a petition of the residents of the town made to the Commissioners, were by them abolished and the road made free to all. As the residents of the town were chiefly benefited by the removal of the tolls, it would appear to be but right that the town should bear some portion of the costs of repair and maintenance of the road, more especially as it is the only direct means of access from the business portion of the town to the Park.

"Until the revenues at the command of the Commissioners are sufficiently large to provide for the requirements of the Park proper and have something over for extensions of the work, it might be well to secure the co-operation of the town in caring for this roadway.

"At various points along the Reserve in front of the town the owners of land on the west side have put drains across the roadway in order to provide sewerage for their properties; and at several places where there are streets abutting on the Reserve the town has put in large tile pipe sewers to the edge of the cliff, where they empty their contents over the bank, the liquid matter to seek the river by running down the steep talus, and the solid to lodge on stones and trees and create offensive odors, which are wafted up to the roadway above by every east wind that blows.

" Muddy Run Creek, which acts as an open sewer for part of the town, spills over the brink at the Whirlpool Rapids, and is very offensive at all times, but particularly in hot weather, to the many thousands who go down to the water's edge to view the Rapids.

" If the town authorities are to be allowed to drain into the river the outlets should be confined to two, or perhaps three, main sewers, and these should be led unbroken down to the waters of the river below.

" Beyond the limits of the town the reserved land follows the edge of the rocky precipice on broken front lot number 74 to Colt's Point, which is at the beginning of the Whirlpool. Around the southerly side of the Whirlpool the Chain Reserve takes the high ground as far as the concession line, where it comes to an abrupt termination, the patents to the lands in the second concession not reserving any ground along the bank of the great Whirlpool ravine.

" The Dominion Government, through its agent, Dr. Douglas of Fort Erie, made a sale of the talus in front of the Chain Reserve over this (B.F.) lot 74, to one Samuel Colt, in December, 1868, receiving therefor the sum of two hundred and fifty dollars. Colt improved the premises and collected tolls from persons using his improvements and going upon the premises to see the Whirlpool. In August, 1887, Colt was served with a notice to surrender possession of the Chain Reserve which he occupied, and of the talus where his improvements chiefly lay, by the Park Commissioners, who disputed the title under which Colt claimed. A long litigation followed, and the judgment rendered by the Hon. Justice Rose was entirely in favor of the Commissioners' claims to the property, a reference being required to determine the value of the improvements made by Colt. The railway company having in the meantime, under their agreement, secured the right to acquire and operate the works referred to, have now pending the question of payment for improvements made, and the extinguishing of all Colt's interest in the premises.

" To provide lands for a favorable location of the electric railway, the Commissioners purchased a strip along the high ground on both sides of the Whirlpool ravine and across the same in the second concession of Stamford. The lands thus secured form a connecting link between the lands of the Chain Reserve south and north of the Whirlpool. The broken lands between lots 58 and 74, in first concession, were never alienated from the Crown until they were vested in the Commissioners.

" The lands under the high bank and between the Chain Reserve proper and the river, in front of lots 58 and 41, were sold by the agent of the Dominion Government in December, 1868, to one John Thompson, the owner of the lots above mentioned. Before title was passed, however, it was ascertained that the fee to these lands did not lie in the Dominion Government, and that therefore the sale was irregular. Mr. Thompson, on learning that title could not

be had from the Dominion Government, applied to the Provincial Government for a patent, but without success. The heirs have registered the receipts given for the money paid, some $250, and claim that the purchase money agreed upon was paid over by the Dominion to the Provincial authorities, and they are therefore entitled to the lands in question.

"The case is in some respects similar to that of Colt, before mentioned which was decided by Hon. Justice Rose in favor of the Commissioners, and presumably the Commissioners have title in and to these lands, which embrace a part of Foster's Flats.

"The lands below the bank in front of lots 40 and 21 were sold before Confederation to one John Lawrence, and have passed to Charles Murray. There is said to be about fifty-three acres in this piece, and as it is the only break in the ownership of the talus from the Suspension Bridge to Queenston Heights, with the exception of a small piece in front of Sir David Macpherson's land, it should be acquired; and I understand measures are being taken to bring it under the control of the Commissioners. An extra piece of land has been secured at 'Wintergreen Flats,' immediately opposite 'Foster's Flats,' but on the top of the bank. This land was considered a desirable purchase, as from it magnificent views of the river and rapids are obtained, and it was considered inadvisable to allow it to fall into an ownership which might be inimical to the plans of the Commissioners.

"The Chain Reserve on the top of the bank ended at lot 1, Stamford, but was continued along the water's edge in front of the gore and throughout the township of Niagara. This left a large part of the talus and all the lands above the bank in private ownership; and it became necessary, in order to provide right of way for the electric railway, to secure land on the top of the bank. The whole of the slope, therefore, and a strip along the top of the bank was acquired, extending down to the Military Reserve at Queenston Heights; excepting only the small part of the slope above referred to and fronting on Sir D. Macpherson's lands. This property is shown on plan 'G,' attached hereto. Right-of-way for the railway across the Macpherson land was secured some distance back from the edge of the bank so as to admit of a practicable grade leading down to the Heights.

"The Military Reserve at Queenston formerly extended along the water front a distance of 3,000 feet, and included all the lands about the escarpment and down to the old military landing place, near which there was a considerable space of nearly level ground. For some reason part of the lands on the level near the river, and even embracing some of the water frontage, was disposed of by the Government of Canada some years ago; all the remainder, including the heights, sloping ground and roadways, etc., is still the property of Canada."

"On the summit of Queenston Heights stands the magnificent monument erected in memory of General Brock. The monument and the grounds surrounding it are cared for by the Government of Ontario, and any expenditure for repairs, etc., are provided for by the Legislature. There does not appear to be any valid reason why the whole of the Military Reserve lands at this point, including the monument and grounds, should not be put in charge of the Park Commissioners. Queenston Heights forms one end of the long panorama of natural wonders of which the park is the other, and the Commissioners control the whole of the intervening ground along the river bank. Then why not make their task complete by having control given them of the northern end? The grounds around the monument are in need of better attention than they now receive; and the balance of the Reserve is but wild lands, receiving no attention whatever."

"There is at present a charge of twenty-five cents made for ascending the monument. This charge must yield a considerable revenue, which would doubtless go a long way towards keeping up the premises; but even though a certain small sum was annually needed to carry out improvements, doubtless the Government would be willing to assist in order to have this historic ground, so near to the hearts of all true Canadians, maintained in a creditable manner."

"Immediately below or north of the boundary of the Military Reserve, a water lot has been patented by the Dominion Government to the Niagara Navigation Company (Limited). It extends 846 feet along the river adjoining the Chain Reserve, and extends 100 feet out into the water. The document bears date 17th July, 1882, the consideration being $200."

"There are some fishing privileges leased at and below Queenston, which I presume is not a matter of interest to the Commissioners. The leases are from year to year, and are issued by Mr. Kerr, Dominion Inspector, of Hamilton, Ontario, and the total revenue for this year was some $50."

"Above and below the Military Reserve and throughout the Township of Niagara, the chain reserved in the patents from the Crown is along the shore line of the river, and not upon the top of the high bank. As the general level of the lands from Queenston to Niagara is from forty to eighty feet above the water surface, and the slopes are more or less steep, it follows that the reserved lands are not at all suited for a roadway, nor are they ever likely to be used for railway purposes, as level lands above can be obtained and a line of railway constructed at small cost."

"There is not much to note respecting the Reserve below Queenston. A license of occupation during the pleasure of the Crown was issued in February, 1867, by Andrew Russell, Assistant Commissioner of Crown Lands, to George Durand, covering the right to occupy one and three-fourth acres of the Chain Reservation in front of part of lot fifteen of Niagara. The Crown Lands

Department also issued a license in March, 1864, for twenty-one years, at $9 per year, of a small water lot in front of part of lot fourteen, Niagara, for the purpose of a wharf. There is no wharf in existence, and the license does not appear to have been extended. Other than this I can find nothing of note, excepting a rather curious and interesting license issued in March, 1866, by the Commissioner of Crown Lands, to the Erie and Niagara Mining Company. The lease was for twenty-five years, and gave the right to explore the bed of the river from Queenston to Niagara, and out to the boundary line of the Province, for ores, metals, minerals or mineral substances, reserving a royalty of two and one-half per cent. upon the value of all such products. The document also stipulated that if the company found it necessary to use any part of the Chain Reserve between Queenston and Niagara for their operations, the Commissioner of Crown Lands would give a license of occupation to the company for such portion thereof as might be in his opinion necessary, and upon such terms as might be agreed upon. The document is signed by William A. Thompson, the President of the Company."

The extent of the territory which has been placed under the jurisdiction of the Commissioners is shown by the following tables, viz :

Frontage on the Niagara River of the several properties :

Locality.	Total frontage.	Frontage vested in the Commissioners.
Township of Bertie	5.75 miles	5.75 miles
Township of Willoughby	10.10 "	7.50 "
Township of Stamford	9.10 "	7.40 "
Township of Niagara	8.00 "	6.25 "
Totals	32.95 miles	26.90 miles

Approximate quantity of land vested in the Commissioners :

	ACRES.	ACRES.
Chain Reserve in front of—		
Township of Bertie	46	..
Township of Willoughby	60	..
Township of Stamford and north of Queen Victoria Niagara Falls Park	44	..
Township of Niagara	50	..
	—	200
The Queen Victoria Niagara Falls Park		154

	ACRES.	ACRES.
Lands below the high bank, or talus :		
In Stamford and Niagara Townships	220	..
Less Murray's rights on Foster's Flats not yet re-conveyed	53	..
	—	167
Additional lands secured for Electric Railway and other purposes		56
Total now vested in the Commissioners		577

"The quantity in Willoughby Township which was not reserved in patents is about twenty-five acres."

"Of all this very valuable property only the small portion embraced within the limits of the park proper, or say ten per cent. of the frontage owned is now maintained in good order and condition. A comparatively small additional expenditure would permit of many simple works of reclamation or improvement being done at points along the river which would enhance very materially the enjoyments of the many visitors who now view the property year by year. Especially should the existing foliage along the high bank from the park to Queenston be kept trimmed and neat and suitable planting of trees or shrubs might be done with advantage at points where there is sufficient depth of soil to permit it."

"Without doubt the whole extent of the property will become more and more valuable year by year, especially if a reasonable amount of attention can be given to its protection and developement. I would, therefore, respectfully urge the early consideration of this important question upon the attention of the Commissioners."

"The whole respectfully submitted,

JAMES WILSON,
Superintendent."

Niagara Falls, July 28th, 1893.

Since the date of the foregoing report some further additions have been made to the lands under the jurisdiction of the Commissioners, notably the portion of Foster's Flats acquired under arbitration proceedings from Charles Murray and embracing some fifty-five acres. This purchase completed the title of the Commissioners to the land below the bank along the whole reach of the river between the Falls and the Military Reserve at Queenston, with the exception of the upper portion of a small piece immediately adjoining the Reserve, and another piece at the head of the Whirlpool, west of the concession line.

In the case of the two suspension bridges referred to in the Superintendent's report, agreements have since been made by which additional lands have been secured to widen the highway at these congested points, and arrangements have also been made by which a right of way for the projected Low Level Railway across the lands under these bridges is provided for. The lease of the Cantilever Bridge Company has not yet been dealt with.

Some small pieces of land required to widen the highway at narrow points in front of the town have also been obtained.

Under the conditions of the agreement made with the Electric Railway Company, authorizing the laying of a second line of rails on the Chain Reserve in front of the town, the even grading of the highway throughout was secured, and the surface made to correspond with the level of the tracks. The proper macadamizing of the road was also provided for, and with the exception of a small portion at the north end of the town, to be completed this spring, the whole of the roadway is now in excellent order. Arrangements have also been made for the future maintenance of this roadway at the joint expense of the Commissioners and the Town of Niagara Falls.

Public attention having from time to time been directed to the lands forming the Military Reserve at Queenston Heights, representations were made to the Government suggesting the desirability of having all these lands vested in the Park Commissioners to be maintained as a part of the Park system.

The lands in question comprise a large territory, extending along the face of the mountain westwards for about a mile from where the Niagara River in years past has cut its deep channel through the limestone rocks; the width of this reserve varying from about one hundred yards at its narrowest part to nearly one thousand yards at the water's edge. The area originally embraced 136 acres, but from time to time portions have been disposed of, so that at present there remain only some 100 acres in the Reserve proper, including Portage Road leading from the river to the southern limits of the Reserve.

Upon the summit of the heights, in a most commanding position, stands the noble shaft erected by the Province in 1856 to the memory of Major-General Sir Isaac Brock, and at the base of the escarpment, immediately under this monumental column—but strange to say, on lands which do not seem to be vested in the Crown—is the cenotaph placed by the Prince of Wales in 1860 to mark the spot where Brock fell. For many years the monument and twelve acres of land adjacent have been under the jurisdiction of the Provincial Government, and all repairs to the shaft or its foundation required from time to time have been made at the expense of the Province. The grounds, however, were not maintained in a

manner worthy of the monument, or of the hero whom it commemorates. The remaining lands, which are still in the hands of the Dominion Government, have been entirely neglected, and for a number of years have presented a very discreditable appearance, not at all in harmony with an enlightened spirit of patriotism.

At the request of the Government the Park Superintendent was directed to examine into and report on the desirability of vesting the twelve acres immediately surrounding the monument, heretofore under the jurisdiction of the Government of Ontario, in the Commissioners; and also on the probable cost of improving and maintaining this part of the property. The Superintendent's report, dated the 12th of September, 1894, is as follows:

"*J. W. Langmuir, Esq., Chairman Queen Victoria Niagara Falls Park.*

"DEAR SIR,—In accordance with your instructions, I have made an examination of the grounds at Queenston Heights, on which stands the magnificent mausoleum of Major-General Sir Isaac Brock, the hero of the battle of Queenston Heights, and of his aide-de-camp, Lieutenant-Colonel Macdonell, and beg to make the following report thereon.

"The grounds which are under the control of the Province, by virtue of an Order in Council, approved by His Excellency the Governor-General of Canada, on the 20th day of December, 1875, embrace only some twelve acres of the Military Reserve at this point, chiefly lying on the table land immediately adjoining the escarpment of the Heights, and including a portion of the eastern slope, on which the fine entrance gate and lodge are erected.

"From the present entrance to the Monument grounds, which is near the eastern angle of the Heights, and on the highway from Niagara Falls down to the Village of Queenston, a broad avenue winds up to the summit of the mountain, where, upon grounds commanding a magnificent outlook over the highly cultivated fruit lands on both sides of the Niagara River, and of the broad expanse of Lake Ontario, stands the noble monument which marks the last resting place of the illustrious Brock.

"In 1824, twelve years after the famous battle, the Provincial Government erected a column on the Heights at a point some 500 feet to the east of the present structure. This consisted of a Tuscan column resting upon a rustic base, and supporting a pedestal designed to carry, at some future time, a statue of the hero, and measuring in all from the ground to top of pedestal some 130 feet; the remains of Brock and Macdonell were deposited in the vault beneath with most imposing military ceremonies on the 13th of October of that year.

"On Good Friday, 17th April, 1840, a vagabond named Lett secretly introduced a large quantity of gunpowder into the base of the Monument, and the

NIAGARA FALLS IN 1678. FATHER HENNEPIN'S SKETCH.

The Upper Rapids From Tempest Point, Queen Victoria Park.

explosion which followed damaged the shaft to such an extent that it could not be repaired. This act of vandalism aroused general indignation throughout the country, and in July of the same year an immense gathering of the leading citizens from all parts of the Province assembled on the Heights to adopt measures for the erection of another monument, and a committee was appointed, of which Sir Allan McNab was chairman, to promote the object.

"Among those present were many who had fought under Brock, and some who had been instrumental in winning the great victory on this spot in 1812, and the enthusiasm was unbounded. The influence of this meeting was felt throughout the country, subscription lists were opened by the militia and Indian warriors, designs were prepared, and the erection of the existing magnificent pile was begun in 1853. The ceremony of laying the foundation stone and of re-interring the remains took place on the 13th of October (the anniversary of the battle) of that year, and the column was completed in 1856.

"The laying out of the grounds around the monument, the massive entrance gates and ornamental lodge, and the completion of the monument enclosure, were provided for by a grant from Parliament. The monument rests upon a substantial foundation of masonry, forty feet square and ten feet below the level of the ground; upon this foundation there is a two-story vaulted basement, measuring thirty-eight feet square at the ground level, and attaining a height of twenty-seven feet. Upon the four corners of the entablature of this basement are the armorial bearings of Brock carved out of stone. The massive basement is surrounded by an enriched pedestal, the die of which is sixteen feet square, and the height, including the cornice and base, thirty-eight feet.

"On the pedestal stands the exquisitely proportioned mammoth column of the Composite order measuring ninety-five feet in total height with a fluted shaft ten feet in diameter, and enriched capital and base. Above the column, and resting on a cippas or statue base, is the colossal statue of General Brock in military costume, and the right arm extended with a baton in the hand, and the left hand resting upon his sword. The total height from ground level to the top of the statue is 190 feet.

"From the ground level a circular stone staircase winds up through the centre of the shaft to the top of the column, where from small openings in the cippas a view may be had of the surrounding landscape at a height of over 500 feet above the level of the river.

"Enclosing the monument is a dwarf wall, measuring seventy-five feet on each of its four sides, and with massive military trophies in stone at the corners; the whole is surrounded by a terraced embankment with a circular driveway, 100 feet in diameter, for the convenince of visitors in carriages.

"On the north side of the pedestal is the following inscription, cut in relief:—

"UPPER CANADA"

Has dedicated this monument to the memery of the late

Major-General Sir Isaac Brock, K.B.,

Provincial Lieutenant-Governor and Commander of the Forces in this Province, whose remains are deposited in the vault beneath. Opposing the invading enemy he fell in action near these heights on the 13th October, 1812,

In the 43rd year of his age,

Revered and lamented by the people whom he governed, and deplored by the Sovereign to whose service his life had been devoted.

"Entrance is had to the interior of the monument by a door on the east side, which opens on a gallery extending around the interior of the base, just above the ground level. On the right hand jamb of the portal is the following inscription on a brass plate:—

A MONUMENT

Was originally erected on this spot by a grant from the Parliament of this Province, and subsequently destroyed in the year 1840. The present monument was erected chiefly by the voluntary contributions of the Militia and Indian warriors of this Province, aided by a grant from the Legislature; the authority for erecting the same being delegated to a committee consisting of the following gentlemen:—

Sir Allan Napier McNab, Bart., Chairman.
Sir John Beverley Robinson, Bart.
Sir James Buchannan Macaulay, Knt.
The Honorable Mr. Justice McLean.
The Hon. Walter H. Dixon.
The Honorable William Hamilton Merritt, M.P.P.
Thomas Clark Street, Esq.
Colonel, The Honorable James Kirby.
Lieutenant-Colonel Daniel McDougall
David Thorburn, Esq.
Lieutenant Garrett, late Forty-ninth Regiment.
Colonel Robert Hamilton.
Capt. H. Monroe, Secretary.

T. G. Ridout, Esq., Treasurer.
William Thomas, Architect.
John Worthington, Builder.

"On the inner side of the gallery, and on either side of the entrance, are the vaults in which are placed the massive stone sarcophagi, containing the remains of Brock and Macdonell. Brass tablets are let into the wall, the one on the right having the following inscription:—

> In a vault underneath are deposited the mortal remains of the lamented Major-General Sir Isaac Brock, K.B., who fell in action near these heights on 13th October, 1812, and was entombed on 16th October at the bastion of Fort George, Niagara; removed from thence and re-interred under a monument to the eastward of this site on the 13th October, 1824, and in consequence of that monument having received irreparable damage by a lawless act on 17th April, 1840, it was found requisite to take down the former structure and erect this monument, the foundation stone being laid, and the remains re-interred with due solemnity on 13th October, 1853.

"The inscription on the tablet on the left is:—

> In a vault beneath are deposited the mortal remains of Lieutenant-Colonel John Macdonell, P.A.D.C., and Aide-de-Camp to the lamented Major-General Sir Isaac Brock, K.B., who fell mortally wounded in the battle of Queenston on the 13th October, 1812, and died the following day. His remains were removed and re-intered with due solemnity on 13th October, 1853.

"About sixteen feet above the level of the principal gallery there is a second one approached by a narrow passageway from the central stairway. Both of these galleries receive light and ventilation from the exterior by means of small circular openings through the massive masonry of the basement.

"The circular stairway is ventilated by various slits in the volutes of the shaft. The stairway is of stone, circular in outline, the steps being thirty-five inches wide at the base, and twenty-five at the top. It terminates in the small cippas on top of the column, and immediately under the statue of Brock. The landing is exceedingly confined and the only means of obtaining a view of the surrounding territory is by thrusting the head into one of the small round openings, a feat which can only be performed by those whose stature has attained to at least normal proportions. The whole space is hardly sufficient for three people to stand in; and it is with difficulty that two can pass on the stairway, so that while the outlook from the top, is, perhaps, one of the finest on the continent,

yet the exertion of toiling up the 235 winding steps, and the impossibility of obtaining a view of more than a fraction of the magnificent panorama when there, usually provokes a feeling of sore disappointment on the part of the visitors. A fee of twenty-five cents is charged for the privilege of ascending the shaft.

"The grounds around the monument receive but little care, and for the most part are much in need of a thorough cleaning and overhauling. The dense growth of cedar along the escarpment completely shuts off the view from the Heights, excepting for a short space immediately in front of the monument, and even there the views are much too limited. A great deal of judicious trimming is needed throughout the grounds, and in places the wild growth of scrubby juniper should make way for ornamental and deciduous trees to vary the tone of the landscape and afford better shade for the numerous picnic parties who frequent the grounds in summer.

"The electric railway now carries great numbers of interested visitors to the monument grounds, and it is most desirable that every facility, not inconsistent with the character of the place, may be afforded them. To accomplish these results I have to make the following recommendations:

"1. That a new roadway approach be made from the west for carriages approaching from the direction of the Falls, and a pathway provided for pedestrians from Brock's monument station of the electric railway.

"2. That a new fence, of neat and open construction, be placed along the highway instead of the present decayed high paling.

"3. Clean up the grounds, open up vistas of the river and surrounding country and plant out ornamental foliage and flowering trees.

"4. Provide a supply of good drinking water on the grounds and better facilities for picnic parties.

"5. Build an incline on the south side of the monument from the level of the ground to the top of the column, the frame work to be of light steel, electric power to be used for working the car, and a promenade made to rest upon the abacus of the column.

"6. Obtain title to the land on which is erected the stone cenotaph marking the spot where Brock fell, and embellish and maintain the same in good condition.

"7. Obtain title to the lands in rear of the monument ground on which earth works have been thrown up, and preserve them from further deterioration.

"A few remarks may be made upon each of these seven proposals.

"No. 1. With respect to the means of reaching the monument. The location of the entrance gates and lodge was evidently made on the supposition that visitors would always approach the ground from Queenston and the north, as Queenston was then the terminus of the lower lake navigation, and railways had not diverted the stream of travel from the water ways. For many years past, however, the great majority of visitors to the grounds drive down from Niagara

Falls, and in consequence have to descend the hill a considerable distance before reaching the entrance, and then climb up again to the site of the monument. A new road of easy gradient should be opened up from the west, and thus avoid ascending or descending the hill, and at the same time save two crossings of the electric railway. The work involved would not be very extensive, and the convenience would be great. An entrance for pedestrians, with a gravelled path leading up to the summit of the heights from a point opposite to the electric railway platform, should also be made for the convenience of visitors from either direction coming by the electric railway.

"No. 2. The existing fence is old and unsightly and should be replaced. I would suggest an iron pipe railing with turned posts, or neatly turned posts and chain, as much more appropriate to the situation. The entrance gates to the new roadway, if any are deemed necessary, should be made in an inexpensive manner.

"With respect to the roadway leading to and the circle around the monument.

"These are of excellent construction, but are at present overgrown with grass and weeds. I would suggest that a width sufficient for driving purposes be cleaned and nicely gravelled so as to distinguish the road in a proper manner, and the remainder of the macadamized approach be turned into sod.

"No. 3. The grounds are overgrown with a wild tangle of evergreens, chiefly red cedars. Much of this should be cleaned away and a selection of suitable shrubs and ornamental trees set out. This work will require judicious handling, but will vastly improve the appearance of the place. The side slopes should also in some places be covered with sod to prevent scouring, and the turf generally requires care and attention. A reasonably large sum will require to be expended in putting the grounds into good order and condition, and a small annual outlay for maintenance be provided.

"No. 4. There is a beautiful spring of water near the summit of the heights, about 375 yards west of the monument. This should be piped to some convenient place on the escarpment, and near to the centre of the grounds, and from thence forced by the aid of an electric pump to a suitable drinking fountain and trough. By placing a tank in the upper gallery of the monument an abundant supply for all purposes could be had at a very small cost for maintenance.

"No. 5. If a convenient means for reaching the top of the column without fatigue and of freely enjoying the sublimity of the emotions created by the delightful panorama could be provided, there is little question but that the revenue which would be obtained from visitors for the use of such appliances would amply provide for the outlay upon all works required to improve and maintain the property. Of course in a case of this kind it is of the utmost importance that nothing be done to detract from the dignity and strength of the monument itself

or that would offend the sensibilities of those who were instrumental in promoting its erection ; and any proposal suggested must have the qualification necessary to afford a reasonable excuse being given for its adoption.

" After considering the question in all its bearings, I have concluded to recommend the erection of an electric lift on the south side of the monument, the frame work to be of light steel lattice work, attached to and supported in part by the column, and extending from the ground level to the top of the capital, the car to be capable of carrying up four persons at a time, to run by electric power taken from the electric railway feed wires, and to be provided with all modern safety and controlling devices.

" On the abacus of the capital there is a space which could be utilized for a promenade, and with a protecting screen that would be practically invisible from below, visitors could obtain in perfect security a continuous view of the magnificent prospect. The framework of the tramway would be of very light construction, and would not be visible at all from the river approach, and scarcely perceptible from the south.

" It has been suggested that it would be feasible to put a lift in the interior of the column, but this would involve the tearing out of the stone spiral stairway which is firmly built into the masonry, and the consequent weakening of the column. Besides, it would give a very contracted car space, and would also necessitate the cutting of a door through the masonry of the cippas which immediately supports the statute of Brock—altogether a proposal of exceedingly questionable merit.

" By constructing the incline as proposed, no interference whatever would be made with the existing structure, excepting only the braces necessary to stiffen the lattice work, and the fastenings for the ropes. From the photograph herewith an idea of the nature of the incline may be had.

" The present charge for climbing the central stairway is twenty-five cents. The charge for the incline could be made twenty-five cents for each person, and the use of the stairway made free ; thus affording a valuable concession to the general public.

" No. 6. Near the base of the heights, and within the village limits of Queenston, there is a small stone cenotaph erected to mark the spot where Brock fell. It is just north of the line of the electric railway, and was erected in 1860, when the corner-stone was placed by the Prince of Wales. The land on which it is located was apparently never secured by those who were instrumental in having the monument erected, and the present ownership, so far as can be ascertained, is in private hands.

" It would appear but reasonable that this interesting and sacred spot should be cared for equally with the more imposing property on the heights ; and I would suggest that say fifty or a hundred feet in width on either side of the stone, by

the whole depth of the lot, should be secured and fenced, and the ground suitably planted and cared for. Title to this piece of property can be had from the present owner.

"No. 7. Immediately west of the monument grounds, on lands belonging to Sir Casimir Gzowski, there are two earthworks or redoubts still in a fairly good state of preservation which were constructed during the war of 1812 by the Royal Engineers under Lieutenant Jenoway. These are at least worthy of preservation in connection with the monument grounds, and I take the liberty of suggesting that an effort be made to secure possession of the lands on which they are situated. Doubtless Sir Casimir would be disposed to transfer them, together with a few acres of his land, to the Commissioners on reasonable terms. Very little work is necessary in order to put these redoubts into fair condition for inspection by visitors, and it would cost practically nothing to maintain them.

"The cost of the several works referred to would be approximately as follows:—

	Proposed works.	Original outlay.	Yearly maintenance.
		$ c.	$ c.
1	New roadway approach from the west	1,000 00	
2	Fence in front	300 00	
3	Putting grounds in order	500 00	400 00
4	Supply of drinking water	300 00	
5	Incline complete	5,000 00	800 00
6	Cenotaph where Brock fell, including cost of lands, fencing etc.	400 00	50 00
7	Redoubts, land etc	2,500 00	50 00
		$ 10,000 00	$ 1,300 00
	Interest on outlay at 4 per cent	.....	400 00
			$ 1,700 00

"To provide for this expenditure an issue of park bonds to the extent of the outlay required, say $10,000 at four per cent., would enable the work to be done, and from the revenues from the lift the proper care of the whole of the properties would be secured for all time.

"Photographs of the monument and cenotaph are enclosed herewith together with a plan of the grounds."

Yours very truly,

JAMES WILSON,
Superintendent.

Queen Victoria Niagara Falls Park,
September 12th, 1894.

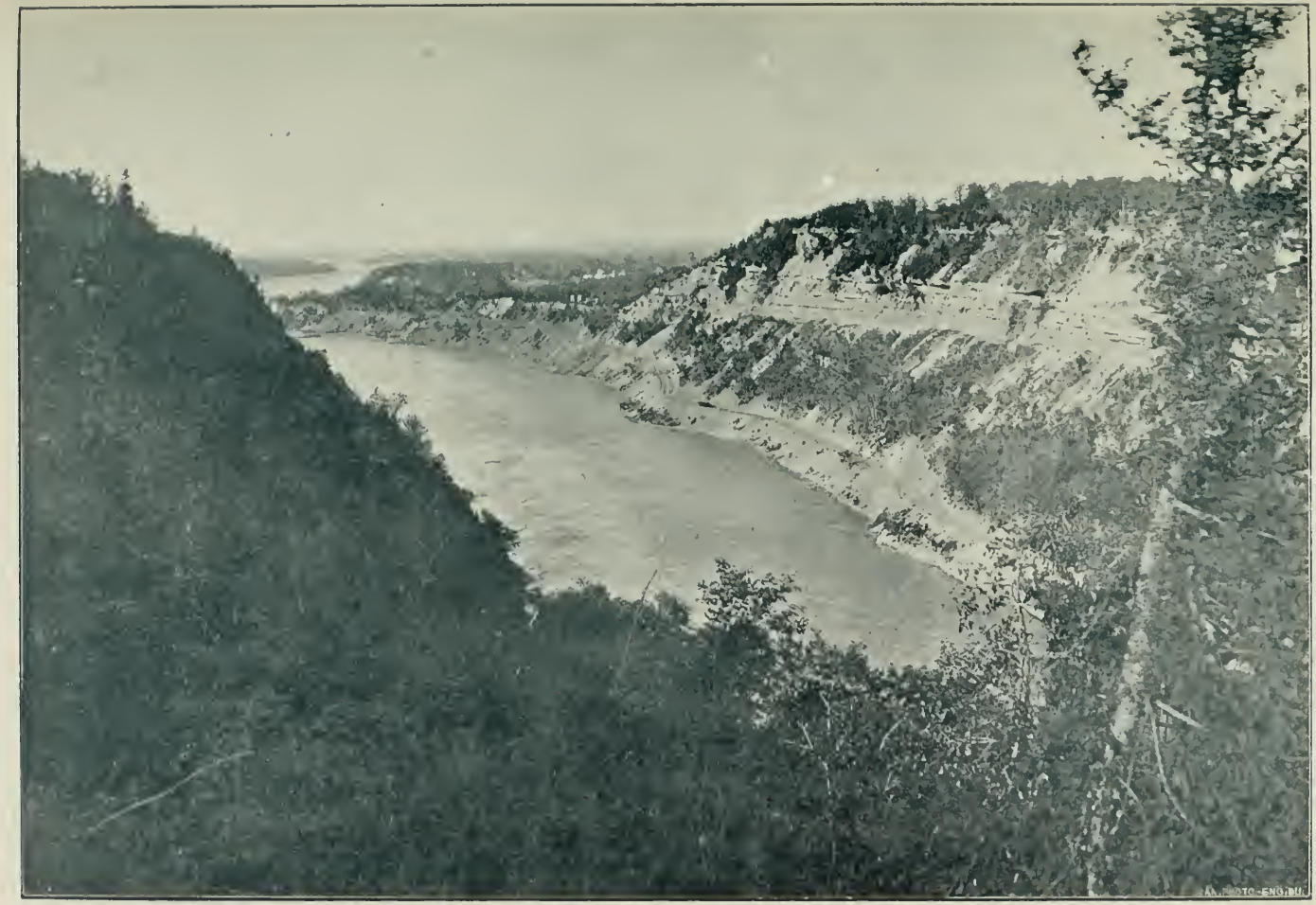
While the Commissioners did not fully endorse the proposal to provide for the maintenance of the premises by the erection of an electric lift, they concurred in the proposal to assume the care of the property, and an Order-in-Council was passed on the 19th March, 1895, placing the monument and the twelve acres of ground under their supervision.

Under a license of occupation, issued on the 20th June, 1891, a portion of the reserve comprising four and seven-tenths acres of the slope was granted to the Commissioners by the Dominion Government as a right of way for electric railway purposes; and on December 18th, 1895, two other parcels of land aggregating five and three-fourth acres were also vested in them by a lease under the great seal of the Dominion. It is confidently expected that before long the balance of this historic property, with which so many glorious associations are connected, will be placed under the permanent jurisdiction and control of the Commissioners, with a view to its proper preservation as part of the general park system.

Upon assuming control of the monument and its adjacent grounds, works of reclamation were immediately begun; the dense growth of juniper which marred the views in every direction was trimmed or removed; new vistas were opened up, conveniences for picnic parties, including a supply of spring water, were provided, and the old wooden picket fence on the side of the highway was removed and replaced by a neat chain railing supported on turned wooden posts of appropriate design. A new and convenient pathway was also opened for pedestrains from the electric railway platform to the main roadway leading up to the monument.

The Commissioners have kept constantly in view from the first the necessity for promptly undertaking the improvement of the various properties placed from time to time under their jurisdiction, and of bringing them as far as possible in harmony with the natural surroundings, while at the same time making every available provision for the comfort and enjoyment of the many thousand visitors who gather here from all parts of the globe. Unfortunately, however, the very limited revenue derived from the property, and the large amount required every six months to meet the debenture interest, necessitated the exercise of the most rigid economy in expenditures for new works, and the most careful husbanding of their resources; consequently after the removal of objectionable structures, and providing for the initial works of construction needed for the opening of the property was accomplished, and for which provision had been made when the first bonds were issued, the most that could be done for several successive years was to keep the grounds in fair order and condition, and to postpone to some more convenient season every undertaking that involved the expenditure of any considerable sum of money. This somewhat parsimonious treatment of the property was greatly to be regretted; but under the circumstances no other course was open to the Commissioners.

Thompson's Point and Whirlpool, Queen Victoria Park.



North Terminus of Niagara Canon, Queen Victoria Park.

Within the last two years some efforts have been made to take up the work in a modest and tentative way, and in the Park proper—that is in the immediate vicinity of the Falls—a good deal has already been accomplished, particularly in planting bare places with selected trees and shrubs of the best kinds, and also adding, where admissible, beds of choice herbaceous perennials. It must be borne in mind, however, that years must elapse before the results to be obtained from planting out deciduous trees or evergreens will be fully realized; consequently any delay in beginning the work necessarily postpones the time when the desired effects of foliage and shade may be expected to reach a fair degree of perfection. The absolute necessity for incurring considerable expense in renewing the crib-work forming the shore protection works in the upper reaches of the Park has also prevented a larger outlay in this most essential and much-needed work.

It may be interesting to show at this point the receipts from all sources since the inception of the Park to the present time, and also the expenditures made in connection with the whole of the property which is under the jurisdiction of the Commissioners:

RECEIPTS.

Bonds issued, proceeds of and advances by the Government for preliminary surveys, etc		$630,882 11
Tolls from visitors "Under the Falls" (five years only)	$20,256 26	
Tolls from visitors over the Islands	14,661 42	
Tolls from visitors to Brock's Monument (1895 only)	308 75	
		35,226 43
Rentals for the privilege of conducting visitors under the Falls, and for the sale of photos. and refreshments		26,491 33
Rentals from the Niagara Falls Park and River Railway Co		42,500 00
Rentals from the Canadian Niagara Power Co		74,577 78
Deposit, Col. A. D Shaw, *re* railway franchise		4,866 66
Sundries, sale of old buildings and materials, etc		3,208 54
Sundries, town of Niagara Falls, towards cost of River Road		1,000 00
Interest on bank deposits		11,757 50
		$830,510 35

EXPENDITURES.

Capital Account.

Lands for park purposes, including cost of surveys, arbitrations and legal expenses in connection therewith	$453,932 72	
Works of improvement, including cost of materials, labor, etc.	56,614 98	
		$510,547 70

Maintenance.

Materials, salaries, wages, etc	$118,247 54	
Commissioners' disbursements and expenses	1,831 11	
Bank interest on temporary loans	8,944 91	
Refund to Col. Shaw *re* railway franchise	4,866 66	
Coupon interest on bonds and charges	183,735 89	
		317,626 11
Balance at Imperial Bank, December 31st, 1895		2,336 54
		$830,510 35

It will thus be seen that, including all the works of construction and renewal completed before the Park was opened to the public, only a little over $50,000 has, to the present time, been expended in opening up and otherwise improving the large extent of territory now embraced in the Park system.

A few facts in relation to the original cost and the expenditures for maintenance and improvements in connection with the New York State Reservation may not be out of place. The following figures are either taken from the published reports of the Board of Commissioners of the Reservation, or supplied through the kindness of Mr. T. V. Welsh, the Superintendent:

New York State Reservation.

Total area embraced by Reservation, 107⅔ acres.

Original cost of land, including the cost of appraisal	$1,452,929 50	
Expended in new works since the opening of the Reservation in 1885	110,000 00	
		$1,562,929 50
Amount of appropriations by Legislature for maintenance account	$185,000 00	
Receipts on account of buildings, etc., sold in the Reservation, and proceeds applied for maintenance	47,514 82	
		232,514 82
Or a total, not including interest on the capital account, of		$1,795,444 32
There has been received since the establishment of the Reservation from rentals and privileges, and from the Incline Railway down to the "Maid of the Mist" landing, the sum of		$71,169 66

As the Reservation was opened to the public on the 15th July, 1885, the cost of maintenance appears to have been about $23,000 per annum on an average, and the expenditure for new works has averaged about $11,000.

Altogether, it is shown by a reference in the last annual report of the Commissioners of the Reservation, that the 107 acres comprised in the State Reservation at Niagara has cost the State of New York, up to the present time, in round numbers, $2,500,000. This is certainly a vast outlay, and one which, without prospect of any financial return whatever, the people of the Empire State have willingly contributed in order to redeem their heritage in Niagara Falls from its unseemly environment, and preserve to succeeding generations this "Crowning glory of the Continent" in all its native beauty and magnificence.

Perhaps we have in the wise and eloquent words of the Commissioners of the State Survey, when reporting to the Legislaiure upon the project in 1880, a key to the noble sentiment which has prompted this great outlay of money on the part of our neighbors, and which without doubt stimulated our Legislature to action in respect to the Canadian side. They say:

"The question cannot be regarded simply as an economical one. It has been fully recognized by wise men in all times and in all lands to be conducive to civilization, to the instruction of the people, and to the conservation of public order, that localities which are associated with the lives, the achievements and the deaths of distinguished men should be set apart, preserved and held as a sacred heritage to be transmitted from one generation to another. In the same way gifts of nature which appeal to the higher sensibilities of mankind by their beauty and by their grandeur are entitled to reverential protection. Americans go to Europe not only to visit the burial places of great men of past generations, but also to see the valleys of the Rhine and the Danube, the mountains of Switzerland and the shores of the Mediterranean. The impulses which thus draw the nations together are a powerful influence for the obliteration of race prejudices, and thus for the preservation of the peace of the world."

"There is nowhere a natural object better adapted to serve these great ends than the Falls of Niagara, and the State which holds such a treasure, holds it under sacred obligations to mankind."

"It cannot be doubted that another generation will hold us greatly to account if we so neglect or badly administer our trust, that the Falls of Niagara lose their beauty and their human interest. If we blame the men of a former day for not setting apart, when it was the property of the State, and might easily have been done, the Falls of Niagara, as the Yosemite and the Yellowstone have in our day been set apart, then how much more culpable shall we be, who, knowing their value and perceiving their certain destruction, still refuse to take the necessary means for their preservation."

In a very important sense, however, the outlay has not been without large pecuniary gain to the citizens of the State of New York in particular, and to the public generally, in the saving effected to visitors by the removal of the charges

formerly made for admission to all chief points of interest. In the seventh annual report of the Commissioners of the reservation, this feature is thus dealt with by the Superintendent:

"A careful observation of the visitors to the Reservation during the entire year, leaves the impression that 500,000 visitors per annum is a fair estimate, and a considerable portion of the whole number are residents of the State of New York."

"Assuming 500,000 visitors per annum to be a fair estimate, and that there has been saved to each the amount of the tolls formerly charged upon the grounds now included in the Reservation, to wit: Fifty cents admission to the Islands, twenty-five cents admission to Prospect Park, and twenty-five cents for the use of the stairway at the Incline Railway in Prospect Park, aggregating one dollar for each visitor, there has been at this time (March, 1890) saved to the public the amount paid by the State for the lands included within the State Reservation at Niagara, and the cost of maintenance up to the present time."

Of course, it can readily be understood that a project of this magnitude, which, though undoubtedly practicable for the wealthy and prosperous State of New York, could only be undertaken by the Province of Ontario upon an entirely different principle, as has already been fully explained. In many respects, however, the Canadian Park system is much more complete than the one on the American side, and embraces sufficient territory to not only command the immediate surroundings of the Falls, but, in addition, nearly the whole reach of the Niagara River, from its beginning at Fort Erie down to the mouth of Niagara. It has been stated that the area of the Queen Victoria Niagara Falls Park, as at first defined, comprised about 154 acres, but to this must be added the lands acquired from private owners for extensions to the park system, and the several properties which have been vested in the Commissioners by the Crown from time to time.

The following tabulated statement shows the approximate areas of the several portions of the park domain:

Queen Victoria Niagara Falls Park (being the park proper)..	154 acres
Chain Reservation along river from Chippawa to Fort Erie..	106 "
Accretions at Fort Erie.....	$10\frac{3}{4}$ "
Chain Reserve and land on top of the high bank of the river northerly from the park to the Military Reserve at Queenston.....	70 "
Talus and lands below the cliff from the park to Queenston..	$255\frac{3}{4}$ "
Lands at Queenston, including portions of the Military Reserve now in tenure of Commissioners.....	35 "

Reserve along water's edge from Queenston to Military Reserve at Niagara-on-the-Lake.....	43½ acres.
Thus giving a total area, not including the water lots, or lands under water, vested in the Commissioners at the close of 1895 of.....	675 "

Of this total area, the Ontario Government conveyed to the Commissioners by Orders-in-Council and by Letters Patent 431 acres, and there has been acquired by purchase 244 acres; the aggregate price paid for the 118 acres which it was necessary to acquire in order to form, together with the thirty-six acres granted by the Government, the Queen Victoria Park was, including cost of survey and arbitration proceedings, $431,874.64, and the cost of the 126 acres which has been purchased outside the park, and which includes some large tracts below the high bank of the river forming the talus and flats, was $22,230.07. When it is borne in mind that the whole of this large outlay for the lands purchased, and, in addition, the very considerable sum which has been expended for improving, supervising and maintaining the property from 1887 up to the present time, has been obtained without drawing on the Government for a single dollar, and when it is remembered, moreover, that from the franchises already referred to, the Commissioners have an assured revenue sufficient to meet all the interest charges on the debentures issued, and in addition a good round sum, over and above the interest payments, has been secured for the general maintenance of the property, the Commissioners feel justified in congratulating the Province on the success which has already been attained in the establishment and carrying on of this great work. These results afford a complete vindication of the prediction made by the Commissioners in the early days of the movement, that the project would in course of time become self-sustaining, and ultimately constitute one of the most valuable assets of the Province of Ontario. The park system has broadened out into proportions not contemplated at the time these opinions were expressed, and the initial outlay has been measurably greater than was anticipated, but notwithstanding all this the whole scheme is now on a well-established and sound basis financially, and the outlook for the future is certainly bright and encouraging.

The work of development, however, may be said to have been but begun. Of all the territory now vested in the Commission, operations on an extensive scale have only been attempted on a portion of the ground within the limits of the Queen Victoria Park, and a beginning made during the past season in the work of reclaiming the grounds around Brock's Monument on Queenston Heights. In the former case a considerable part of the grounds near the Falls must be underdrained before other improvements can be commenced. Long reaches of crib work protection to the shores of the river require to be rebuilt, and in some cases considerably extended in order to prevent further damage to

the beautifully wooded slopes forming the bank of the river near Clark Hill; and the insidious erosion of the land near Tempest Point, by the fierce action of the stormy waters of the rapids, must be guarded against by a similar provision. New pathways, opening up convenient avenues to the shady hillsides enclosing the park, and from whence the most charming vistas of all the varied aspects of land and water may be enjoyed, are urgently needed, as well as permanent forms of driveway construction wherever the influence of the spray has the effect of changing, in an hour, smooth gravel-ways into veritable lakes of mud, even on the brightest days of summer. Additional arbors and shelters of rustic design must be provided, to give the accommodation which experience has shown to be necessary, and the general work of planting out foliage and shade trees, with desirable forms of shrubbery, prosecuted with a greater degree of energy than has been practicable in the past.

For a number of years the execution of some most needed and desirable improvements, particularly in the immediate vicinity of the Falls, had to be postponed for want of the necessary funds, and in consequence the precautions against unduly crowding the visitors at certain points of commanding interest could not be provided. It may be stated that during the months of July and August, and part of September, the visitors usually arrive in very large contingents; and as the time at their disposal in which to "see Niagara" is generally limited to a few hours, a hurried round of the chief attractions is all that can be attempted; and this is frequently done in such large aggregations that crowding takes place, with all its discomforts and evident want of harmony with the emotions awakened in every thoughtful mind by the distinctive charms of Niagara scenery.

The only way in which this unseemly condition of things can be guarded against is by the opening up of a number of additional points of attraction, and the development of new and interesting features of natural scenery, with restful arbors, of easy access from the main thoroughfares, by means of which the numbers may be distributed over a wider area and the tranquil enjoyment of each one greatly enhanced.

During the past season work upon a much more extended scale than was permissible heretofore has been undertaken, and should nothing unforeseen take place to disturb the plans which the Commissioners have in view, much better effects may be expected in the course of a few years in the general character of the scenery in and around the extensive territory which now forms the Park system, and the many incongruities which have perforce been permitted to remain up to the present time will be removed, or ameliorated, as far as it is possible to do so.

There are several objectionable features in the Park which the Commissioners feel to be somewhat at variance with what may be considered as the ideal in

respect to the environment of the Falls, among which may be noted the large stone structures comprising the Restaurant, Table Rock House, and the electric railway power house. The circumstances, however, under which the whole project was placed, and the necessity of realizing a revenue from the property as a *sine qua non* for its very existence, rendered the preservation of these buildings essential to the success of the enterprise; and, consequently, they have been allowed to remain. In addition to these structures there is a large stone building very near the edge of the Horse Shoe Fall, which was built for the town waterworks pumping station, and although no revenue is derived from it, it is allowed to remain as a concession to the citizens of the town in order that they may have a proper supply of water for fire protection and household purposes. In all of these cases efforts will be made to minimize the want of harmony which these structures now present with the natural conditions, and doubtless much will be accomplished in this direction in the future. The conservation of the natural scenery along the lower reach of the river, on top of the cliffs, as well as within the walls of the cañon, and the removal of objectionable or unnecessary artificial features, will also shortly be taken in hand and carried on with as much expedition and thoroughness as possible.

Since the acquisition of the outlying territories, some change would appear to be desirable in the nomenclature of the several properties which are now embraced within the jurisdiction of the Commissioners, some of these having a character distinct in themselves, with local designations, more or less appropriate, and now all forming, and quite properly so, integral parts of the Park system.

After some consideration the Commissioners would take the liberty of suggesting for the consideration of His Honor the Lieutenant-Governor in Council, the following appellations as being appropriate for the chief divisions of the property, and by which they should be known in future, viz.:

The whole of the territory extending from Fort Erie to Niagara on the Lake to be called "The Queen Victoria Park," and the Commissioners for the time being, known and designated as "The Commissioners for the Queen Victoria Park."

That portion of the property which is comprised within the original limits of the Queen Victoria Niagara Falls Park to be designated "The Niagara Falls Park."

The extension of the talus below the high bank, north of the whirlpool, which is sometimes called Foster's Flats, together with Wintergreen Point, which forms a projection of the cliff immediately above, to be designated "Niagara Glen."

The grounds in the vicinity of Brock's Monument, to be still known as "Queenston Heights." The sixty-six feet strip along the shore of the upper

river, between Chippawa and Fort Erie, to be called "Niagara Riverway," and the existing driveway along the edge of the cliff, in front of the Town of Niagara Falls, "Victoria Parkway."

Should this suggestion be approved, the necessary authority might be given to authorize the adoption of these changes.

Vast numbers of visitors have been attracted to Niagara, from all quarters of the earth, by the fame of its marvellous beauty and the exceeding vastness of its power, which has perforce captivated the senses and compelled the admiration of every cultured observer from the time when Father Hennepin first gazed upon the stupendous spectacle in 1678, down to the present time. The emotions created in the mind of Father Hennepin, who was the first European of whose visit we have any record, found vent in the following words, which are taken from his "New Discovery of a Vast Country in America," published in London, England, in 1698 :

"Betwixt the Lake Ontario and Erie, there is a vast and prodigious cadence of water which falls down after a surprising and astonishing manner, insomuch that the universe does not afford its parallel. 'Tis true, Italy and Suedland boast of some such things, but we may well say they are but sorry patterns when compared to this of which we now speak. At the foot of this horrible precipice we meet with the River Niagara, which is not above a quarter of a league broad, but is wonderfully deep in some places. It is so rapid above this descent, that it violently hurries down the wild beasts while endeavoring to pass it to feed on the other side, they not being able to withstand the force of its current, which inevitably casts them headlong above six hundred feet high.

"This wonderful downfall is compounded of two great cross streams of water, and two falls with an isle sloping along the middle of it. The waters which fall from this horrible precipice do foam and boil after the most hideous manner imaginable, making an outrageous noise, more terrible than that of thunder; for when the wind blows out of the south their dismal roaring may be heard more than fifteen leagues off.

"The River Niagara, having thrown itself down this incredible precipice, continues its impetuous course for two leagues together to the great rock above mentioned with an inexpressible rapidity; but, having passed that, its impetuosity relents, gliding along more gently for other two leagues till it arrives at the Lake Ontario or Frontenac.

"Any bark or greater vessel may pass from the Fort to the foot of the huge rock above mentioned; this rock lies to the westward and is cut off from the land by the river Niagara, about two leagues farther down than the great fall; for which two leagues the people are obliged to transport their goods overland; but the way is very good and the trees are but few, chiefly firs and oaks.

Under Table Rock in Winter, Queen Victoria Park.

Ice Formations Under Table Rock, Queen Victoria Park.

"From the great fall unto this rock, which is to the west of the river, the two brinks of it are so prodigious high that it would make one tremble to look steadily upon the water rolling along with a rapidity not to be imagined. Were it not for this great cataract, which interrupts navigation, they might sail with barks or greater vessels more than four hundred leagues, crossing the Lake of Huron and reaching even to the farther end of the Lake Illinois; which two lakes we may easily say are little seas of fresh water."

Although Father Hennepin's estimate of the height of the cataract was doubtless somewhat affected by the sympathetic impulses of his admiration and awe at the wonderful spectacle, yet in some respects his description is most interesting and valuable, the more so as he has furnished us with a bird's eye picture of the Falls and upper river to Lake Erie as they appeared at the time of his visit. This interesting drawing is here reproduced:

"Since Father Hennepin's day, countless pilgrims have recorded the impressions made upon their minds by the sight of the same glorious scenes.

'Early in this century (1804) Tom Moore, the eloquent Irish poet, made a special journey from New York to see Niagara, a more difficult feat in those days than it is now, and chronicles his emotions in these soul-stirring words:

"'I have seen the falls, and am all rapture and amazement. I cannot give you a better idea of what I felt than by transcribing what I wrote off hastily in my journal on returning.

"'Arrived at Chippawa, within three miles of the Falls, on Saturday, July 21st, to dinner. That evening walked towards the Falls, but got no further than the rapids which gave us a prelibation of the grandeur we had to expect. Next day, Sunday, July 22nd, went to visit the Falls. Never shall I forget the impression I felt at the first glimpse of them which we got as the carriage passed over the hill that over-looks them. We were not near enough to be agitated by the terrific effects of the scene; but saw through the trees this mighty flow of waters descending with calm magnificence and received enough of its grandeur to set imagination on the wing—imagination which, even at Niagara, can outrun reality. I felt as if approaching the residence of the Deity; the tears started into my eyes; and I remained, for moments after we had lost sight of the scene, in that delicious absorption which enthusiasm alone can produce. We arrived at the New Ladder, and descended to the bottom. Here all its awful sublimites rushed full upon me; but the former exquisite sensation was gone, I now saw all. The string that had been touched by the first impulse and which fancy would have kept for ever vibrating, now rested in reality. Yet, though there was no more to imagine, there was much to feel. My whole heart and soul ascended towards the Divinity in a swell of devout admiration which I never before experienced. Oh, bring the atheist here and he cannot return an atheist. I pity the man who can coldly sit down to write a description of these ineffable

wonders; much more do I pity him who can submit them to the admeasurement of gallons and yards. It is impossible by pen or pencil to give even a faint idea of their magnificence. Painting is lifeless, and the most burning words of poetry have all been lavished upon inferior and ordinary subjects. We must have new combinations of language to describe the Falls of Niagara.'

In the year 1842 Charles Dickens, that great master of the pen, whose gifts and graces all the English speaking world reveres, says in his 'Notes on America':

"'In the morning we arrived at Buffalo, and being too near the Great Falls to wait patiently anywhere else, we set off by the train at nine o'clock to Niagara. It was a miserable day, chilly and raw, a damp mist falling, and the trees in that northern region quite bare and wintry. Whenever the train halted I listened for the roar; and was constantly straining my eyes in the direction I knew the Falls must be from seeing the river rolling on towards them; every moment expecting to behold the spray. Within a few minutes of our stopping, not before, I saw two great white clouds rising up slowly and majestically from the depths of the earth, that was all. At length we alighted, and then, for the first time, I heard the mighty rush of water, and felt the ground tremble underneath my feet. The bank is very steep and was slippery with rain and half melted ice. I hardly knew how I got down, but I was soon at the bottom and climbing, with two English officers, who were crossing and had joined me, over some broken rocks, deafened by the noise, half blinded by the spray, and wet to the skin. We were at the foot of the American Fall. I could see an immense torrent of of water tearing headlong down from some great height, but had no idea of shape or situation, or anything but vague immensity. When we were seated in the little ferry boat and were crossing the swollen river, immediately before both cataracts, I began to feel what it was; but I was in a manner stunned, and unable to comprehend the vastness of the scene.

"'It was not until I came to Table Rock, and looked, Great Heaven, on what a fall of bright green water, that it came upon me in its full might and majesty. Then when I felt how near to my Creator I was standing, the first effect and the enduring one—instant and lasting—of the tremendous spectacle was peace, peace of mind; tranquility; calm recollection of the dead, great thoughts of eternal rest and happiness, nothing of gloom and terror. Niagara was at once stamped upon my heart, an image of beauty, to remain there changeless and indelible, until its pulses cease to beat forever.

"'Oh, how the strifes and trouble of our daily life receded from my view, and lessened in the distance, during the ten memorable days we passed on the enchanted ground. What voices spoke from out the thundering water; what

faces faded from the earth, looked out upon me from its gleaming depths; what heavenly promise glistened in those Angels' tears, the drops of many hues, that showered around and twined themselves about the gorgeous arches which the changing rainbow made, I never stirred in all this time from the Canadian side whither I had gone first. I never crossed the river again, for I knew there were people on the other shore, and in such a place it is natural to shun strange company.

"'To wander to and fro all day and see the cataract from all points of view, to stand upon the edge of the great Horse Shoe Fall, marking the hurried water gathering strength as it approached the verge, yet seeming, too, to pause before it shot into the gulf below; to gaze from the river's level up to the torrent as it came streaming down; to climb the neighboring heights and watch it through the trees, and see the wreathing water in the rapids hurrying on to take its fearful plunge; to linger in the shadow of the solemn rocks three miles below; watching the river as, stirred by no visible cause, it heaved and eddied and awoke the echoes, being troubled yet far down beneath the surface by its giant leap, to have Niagara before me, lighted by the sun and by the moon, red in the day's decline, and grey as evening slowly fell upon it; to look upon it every day, and wake up in the night and hear its ceaseless noise; this was enough.

"'I think in every quiet season now, still do those waters roll and leap, and roar and tumble all day long; still are the rainbows spanning them, a hundred feet below; still, when the sun is on them, do they shine and glow like molten gold; still, when the day is gloomy, do they fall like snow, or seem to crumble away like the front of the great chalk cliff, or roll down the rock like dense white smoke.

"'But always does the mighty stream appear to die, as it comes down, and always from its unfathomable grave arises the tremendous ghost of spray and mist, which is never laid; which has haunted this place with the same dread solemnity since darkness brooded on the deep, and the first flood before the Deluge, light came rushing on creation at the Word of God.'"

Grand though the panorama of the Falls may be in the springtime, when prolific nature clothes the setting in the brightest green, or in the autumn when the rich and varied tints of the deciduous foliage contrasting with the more solemn evergreens in the surrounding landscape, add a charm that is at once striking and delightful; yet it is in winter, when Boreas holds sway, and all the brilliant shades of autumn or the refreshing verdure of spring time, which furnish such a pleasing framework to the majestic river and Falls, are wreathed in a mantle of white, that the most sublime and inspiring emotions are awakened in the human mind.

We cannot do better than quote the words of our brilliant fellow citizen, Principal Grant, of Queen's University, in describing the beauty of the winter scenery in the vicinity of Table Rock. He says :

"'After a few days of hard frost in winter, the Falls become more like a vision of some enchanted land than a real scene in the world we are living in. No marvels wrought by genii and magicians in eastern tales could surpass the wonderful creations that rise along the surrounding banks and hang over the walls of the cataract. Glittering wreaths of icicles like jewelled diadems gleam on the brow of every projecting rock and jutting crag. Arches, pillars and porticos of shining splendor are grouped beneath the overhanging cliffs, giving fanciful suggestations of fairy palaces beyond. Every fallen fragment of rock under its icy covering becomes a marble column, pyramid or obelisk, and masses of frozen spray stand up here and there in graceful and statuesque forms, easily shaped by imagination into the half finished work of a sculptor.

"Every rift and opening in the cliff is transformed into an alabaster grotto, with friezes and mouldings 'all fretted and froze' with filagree wreaths and festoons and filmy veils and canopies of lace-like pattern and gossamer texture ; and on every curve and angle, round every fissure and crevice, some fantastic and lovely decoration is woven by winter's master artist, king frost. Every tree and shrub, every tiny twig and blade of grass, on which this wonder-working spray falls and freezes, becomes wrapped in a gleaming white crust, and glistens in the sun as if made of crystal and mother of pearl. From the tips of the evergreen branches hang clusters, of ice balls, popularly called ice apples, which flash and glitter when the rays of sunlight fall on them, like the jewels growing on the trees of the magic garden in the Arabian Nights. Still more fairy like are the evanescent charms produced by a night's hoar frost, fringing the pearly covering in which everything is wrapped with a delicate, fragile efflorescence, and giving a soft, shadowy, visionary aspect to the whole scene, as if it were the creation of some wonderful dream, then as the sun, before which its unearthly beauty melts away, shines out, all changes for a few brief minutes into a sparkling, dazzling glory, as if a shower of diamond dust had suddenly fallen."

Although the "Crowning Glory" of Niagara is unquestionably the great Horse Shoe Fall, and second only to that the wondrously beautiful American Fall, and to these, therefore, will ever be given the highest pœans of man's admiration; yet in the minds of many a scientific and appreciative visitor, the feelings of wonder and interest created by the distinctive beauty of the Great Canon, holding in its giant grasp the aggregated volume of water hurled over the two great Falls, or by the strange phenomenon of the mighty Whirlpool, whose ceaseless gyrations interrupt the onward rush of maddened waters, are hardly less intense or delightful than those which are called forth by the contemplation of the Falls themselves.

Mr. Frederick Law Olmsted, in his report before referred to on the proposed park scheme, quotes the words of William Robinson, F. L. S., as follows :

" The noblest of nature's gardens that I have yet seen is that of the surroundings and neighborhood of the Falls of Niagara ; grand as are the colossal Falls, the Rapids and the course of the river for a considerable distance above and below possess more interest and beauty.

" As the river courses far below the Falls, confined between vast walls of rock, the clear water of a peculiar greenish hue, and white here and there with circlets of yet unsoothed foam, the effect is startlingly beautiful, quite apart from the Falls. The high cliffs are crested with woods, the ruins of the great rock walls forming wide, irregular banks between them and the water, and also beautifully clothed with wood to the river's edge, often so far below that you sometimes look from the upper brink down on the top of tall pines that seem diminished in size. The wild vines scramble among the trees ; many shrubs and flowers seam the high rocks ; in moist spots here and there a sharp eye may detect many flowered tufts of the beautiful fringed gentian, strange to European eyes ; and beyond that, and at the upper end of the wood-embowered deep river bed, a portion of the crowning glory of the scene—the Falls—a vast cliff of illuminated foam with a zone towards its upper edge as of green molten glass."

Again, a mile below the Whirlpool, the beautifully wooded talus which lies between the high cliffs and the water's edge, widens out to form the expanse locally known as Foster's Flats, a lovely spot which has been described by Principal Grant in the following words :—

" Lying under the cliffs which project picturesquely above it, richly wooded, interpersed with rocky mounds, leafy dells, and moss-grown hollows, shut in by the great lichen covered rocks, this tiny glen is a perfect epitome of wild natural beauty, only accessible by a winding precipitous path from the cliffs above, sheltered by its lofty banks and embowed trees, and kept fresh and green in the heats of summer by the moisture from the river, verdure lingers here nearly all the year around and its temperature in winter is almost as mild as if it looked up at a southern sky. Beautiful even in winter, this favored spot, in spring is a perfect paradise of wild flowers and blossoming shrubs. Its rocks, worn into caves and grottos by the water which once covered them, are hung with graceful tapestry of ferns, mosses and plants ; even tall trees grow on their tops, and send down a maze of tangled roots to reach the earth below. Rare and lovely shrubs and trees flourish here uncared for and unheeded, and ferns of every variety grow, in the most lavish profusion. At one extremity of the glen the river has formed a charming little eddy, smooth and clear as glass, where fish are caught with hook and line ; at the other a miniature bay lies within the rocky cape that

encloses it with a beach of rounded pebbles, on which the river, torn and tortured by the rocks that obstruct its way, dashes and breaks like the waves of the sea."

Realizing the great value of a better acquaintance with the teachings of science on this subject, the Commissioners have, through the great courtesy of the author, been permitted to republish, as an addenda to this report, the most recent results obtained from careful and reiterated surveys of this region made by Professor G. K. Gilbert of the U. S. Geological Survey, one of the best known authorities in America on geological subjects; and whose monograph will, without doubt, be read with very great interest and appreciation by all whom it may reach.

Many eminent scientific men have recorded their appreciation of the infinite variety and wonderful profusion of the vegetation found in the Niagara District. Doubtless this is in part owing to the beneficient influence of the spray in tempering the conditions of heat and cold, and supplying abundance of moisture in seasons of drought. The Park officials have for several years been making a collection of all the species found in the territory comprised in the Park, and these have been mounted and catalogued for the Herbarium in the office of the Superintendent of the Park at Niagara Falls. Through the kindness of Professor Macoun, the Dominion Botanist, the name of each specimen in the collection has been very carefully verified.

In a letter of recent date, Professor Macoun remarks: "I consider Queenston "Heights, the valley of the Niagara River and the neighborhood of the Falls as "far up as Chippawa, the best botanical ground in Canada; many species found "there, and which are enumerated in the list, have a southern range which will "prove to visitors the mildness of the climate and the value of the region about "the Falls for fruit culture. The custard apple, the tulip tree, the sassafras and "the sour gum are good examples of the mildness of the winters, and many her-"baceous plants of the great heat of summer and autumn."

The catalogue, revised up to date, will also be found as an addenda to this report.

The Commissioners cannot close this general resumé of the work of the past ten years without referring to the invaluable services rendered the Park project by Sir Casimir Gzowski.

From the creation of the Park Commission in 1885, and during the first seven years of its history, a period of active negotiation and work, and of continued and grave anxiety to the Commissioners as to the success of the undertaking, Sir Casimir had been the chairman of the Board, and it was with unfeigned regret that his colleagues learned from him his decision to retire from active service on the commission.

On the retirement of Sir Casimir Gzowski in 1892, the Government appointed Mr. George H. Wilkes, of Brantford, a commissioner; and Mr. J. W. Langmuir, who had been a member of the Board since its inception in 1885, was made chairman.

The Commissioners also desire to record the great loss sustained by the Board in 1889 in the removal, by death of Mr. J. Grant Macdonald. Mr. Macdonald had been a Commissioner for a period of over four years, and his kindly bearing had at all times endeared him to his fellow Commissioners.

Having given in a somewhat extended form the history of the Park since its inception, the Commissioners do not consider it necessary to enlarge upon the work of the past year, a detailed reference to which will be found in the Report of the Superintendent of the Park, which is appended hereto. The following summary will show the receipts and expenditures for the year:—

Receipts.

Balance on hand at Imperial Bank, January 1st, 1895		$ 6,463 44
Rental from photo. and refreshment privileges and the right to conduct visitors "Under the Falls."		8,200 00
Rental from the Niagara Falls Park & River Railway Company		10,000 00
Rental from the Canadian Niagara Power Company		25,000 00
Receipts from tolls on carriages over islands	$ 1,385 20	
" " Visitors to Brock's Monument	308 75	
		1,693 95
" " Town of Niagara Falls for repairs of river road		1,000 00
Receipts from sundries, sales of old materials, etc.		134 25
" " Imperial Bank, interest on deposits.		170 77
		$ 52,662 41

Expenditure.

CAPITAL ACCOUNT.—

Permanent improvements, including cost materials, etc	$ 4,427 27	
Wages of mechanics and laborers	2,947 29	
Land purchases	3,338 15	
Legal expenses	705 00	
Miscellaneous	341 05	
		$11,758 76

MAINTENANCE ACCOUNT.—

Salaries and wages, including wages of laborers, teams, etc	$11,723 57	
Materials	2,045 88	
Office expenses	168 67	
Commissioners' expenses	297 70	
Miscellaneous	103 79	
		14,339 61
Coupon interest and charges		24,227 50
Cash on hand in Imperial Bank, Dec. 31st, 1895		2,336 54
		$52,662 41

All which is respectfully submitted.

J. W. LANGMUIR,
Chairman.

JOHN A. ORCHARD,
GEORGE H. WILKES,
Commissioners.

Brock's Monument, Queenston Heights, Queen Victoria Park.

Looking North From Queenston Heights, Queen Victoria Park.

APPENDIX.

QUEEN VICTORIA NIAGARA FALLS PARK.

ANNUAL REPORT OF THE SUPERINTENDENT FOR THE YEAR 1895.

To the Commissioners of The Queen Victoria Niagara Falls Park.

GENTLEMEN:—I beg to submit my report for the year ending 31st December, 1895.

The winter of 1894-5 was a very pleasant one at the Falls, a comparatively heavy snow fall, and consequent good sleighing, bringing many visitors to see Niagara in its winter beauty, and with all its characteristic charm of frost and spray transformations, as it is gathered and developed in icy foliage, or superimposed in glittering masses, on every object in the vicinity of Table Rock. The mounds at the base of the Fall assumed very large proportions as the winter wore on, and the visitors who would venture on them, were amply repaid by seeing the magnificent array of curtain-like draperies, of spotless purity, pendent from the face of the cliffs immediately in front; while to the left the great sheet of dark green waters, leaping from the heights above and breaking into myriads of fragments ere half the distance is accomplished, plunge into the foaming cauldron below, with a roar that is terrific by reason of its nearness, and delightful for its deep tone vibrations.

This year again a large part of the cliff extending from Table Rock southwards was entirely covered by ice, and the waterway of the Horse Shoe Falls reduced at its western extremity by over 400 feet. As this is doubtless owing to the receding of the water, having recurred for several years in succession, it appears to be altogether likely that the change is becoming a permanent one, and that visitors will soon require a new means of approach to the edge of the chasm at the very brink of the Falls,

The roads and pathways through the park were kept clear of deep snow, and all icy places, where there might be danger of visitors falling and injuring themselves, broken up and made safe.

The skating rinks, referred to in last year's report, which were made on the ponds near the principal entrance of the park, and also at the end of Cedar Island, were keep in good order, and were very much enjoyed by the young people of the town and vicinity for quite a long period.

On the opening of the season for outdoor work, the usual works of cleaning up were taken in hand and all the property in the park, which had been drained and put into shape, was maintained in good condition. Immediately to the south of the restaurant, a part of the broken ground at the base of the high hill bounding the property on the west, was graded and made to form an extension of the picnic grounds; and the numerous springs of water, which had made this portion of the park almost impassable were drained off.

Between the restaurant and Table Rock House the nearly level ground between the railway and the foot of the hill was carefully drained, and a large part of it trenched, in preparation for a bed of ornamental shrubbery, which it is intended to plant out in the ensuing summer.

The setting out of foliage and shade trees was prosecuted more extensively this year than at any time since the establishment of the park; and a large variety of the best stock that could be obtained, of trees suitable for the place, was set out. We have also secured a large selection of the choicer varieties of evergreen, mainly kinds which were not found on the place, some of which were set out and others put into nursery beds for transplanting in a year or two. In addition to this we have planted out in suitable localities a very large quantity of ornamental and flowering shrubs, which have been propagated in our nursery, and very pleasing effects have already been obtained therefrom.

As an experiment, some dozens of rhododendrons, and azaleas, of the more hardy kinds, have been set out in the picnic grounds, in expectation that they will thrive well where subject to the moderating influences of the spray. Should our experiment prove a success, we hope to try many other desirable forms of half hardy shrubs and plants in various portions of the park.

The grounds near the front entrance were levelled and improved and some very choice stock of a dwarf character put in. Altogether, with what has been done in the past season, that portion of the park which lies between the Clifton House and the restaurant is now fairly well provided for; and the portion between the restaurant and Table Rock will be filled up as much as it is considered desirable to do, by the end of the next year. Of course there are still many spots where beds of shrubbery should be planted out and clumps of specimen trees of a distinctive character so placed as to exhibit all the varieties of their order, but what is being attempted is to get some good general effects, with the least possible delay.

In the upper part of the Park, between the gardener's house and the Dufferin Islands, the uneven piece of ground between the railway and the water's edge was levelled, and planted with some good shrubbery. As this is a well sheltered portion of the property we expect to get some very good results from this season's work. Heretofore it has been difficult to secure a sufficient supply of water for irrigating purposes, during dry seasons, in this locality; but steps have been taken to overcome this evil for the future, and we hope soon to have this beautiful reach of the premises put in much better order than has been heretofore possible.

In addition to the work of planting out, we have improved the driveways in the Park at several points, and made a new pathway from the edge of the cliff up to the base of the hill at the "Jolly Cut." Some other pathways in this vicinity are required, which we hope to undertake during the ensuing year.

A very important work, which has been delayed from year to year for want of the necessary funds to carry it out, and which has been from the first one of the chief improvements contemplated, is a pathway along the side of the beautifully wooded hill, enclosing the Park on the west, from the Clifton House road to the Dufferin Gate. Such a pathway would open up innumerable vistas of the most charming description, and carry the discerning pedestrian along the choicest ground for botanical research. It is to be hoped that a beginning may be made upon this very interesting work during the coming year.

The usual work of maintaining the roads, pathways, bridges and buildings throughout the Park proper has been carried on during the year, and everything was kept in good shape. In last year's report reference was made to the pressing need for continuing the work of protecting the shores of the river at several points, but notably on the mainland opposite the wildest part of the upper rapids, at Tempest Point. This work was prosecuted vigorously during the summer, and 750 feet of cribwork put in around the great bend beyond Clark Hill, and over 100 feet laid down in the rapids at Tempest Point. All this work has been substantially done and will doubtless afford a very complete protection to the side hill for many years to come. About 500 feet remains to complete the cribwork to the summer house at the end of Riverside Ramble; this gap will be filled in early in the summer. On the completion of this work, and when the funds will admit of it, a gravelled walk is intended to be constructed over the whole length of this reach of cribwork, from the present terminus of Riverside Ramble to Dufferin Gate, a distance of over 600 yards, thus affording a lovely shaded ramble around this interesting bit of the river, and sensibly extending the facilities for the enjoyment of pedestrians. Three or four additional cribs are still required to carry the shore protection well below Tempest Point. The original cribwork facing to Cedar Island, which was put in some thirty-five years ago, is now nearly all gone, and before long it will be necessary to rebuild the whole reach

in front of this island from the "gap" down to the intake of the Electric Railway Company. As this work is necessarily of a somewhat expensive character, it will be deferred as long as possible, but a beginning will require to be made in 1896 or 1897. At several points along the many small streams traversing the Dufferin Islands, the present timbering is decayed and will also require to be renewed before long.

Around the buildings in the Park attractive flower beds have been provided, as it has been considered to be well within the scope of the Park scheme to use flowers at such points. In order to provide a permanent and sufficient supply for the use of the Park at little cost, a small greenhouse has been constructed, chiefly out of materials on hand, and a stock of the more thrifty varieties of flowers suitable for this purpose has been secured.

It was found impossible to close the gravel pit by forming it into a lake, as was intended, owing to the continued necessity for taking gravel for roadway purposes. Early in the ensuing spring it is proposed to take out a large quantity of suitable gravel, clean off the bottom of the pit, and let the water in for the summer. The completion of the work will have to be delayed for a year or two, until provision can be made for securing suitable road metal elsewhere. The gravel obtained from this source has been of exceeding value to the Park, and we cannot close it up without going to a considerable expense for other road material suitable for our purposes. When the lake is fully developed, however, it will form a very attractive feature, and the vicinity is capable of being made one of the choicest portions of our fair domain.

The ancient stone building, which for many years previous to the establishment of the Park was used for a general store, and which had been turned into a drive shed for the shelter of carriages from the spray while awaiting visitors to Table Rock, was torn down in the spring and a new and more convenient structure erected immediately to the rear of Table Rock House, where it is at once out of sight, and removes a rather disagreeable necessity from too close proximity to the public thoroughfares. The area occupied by the building has been cleaned up and the ground prepared for beds of shrubbery to be planted in the spring.

Our visitors this year were very numerous, but owing to the great numbers brought by the electric railway from both directions, and frequently up to a late hour at night, we have not attempted to keep a detailed tally as before. A very careful estimate, however, places the number at about 500,000.

The number of carriages entering the Park was not quite as large as in 1894; but the numbers brought in by the electric railway more than compensated for any deficiency in this respect. It may be noted, too, that a very large number visited the Park at night, to enjoy the weird moonlight effects upon the crest of the falls, on the drifting spray clouds, and on the foam of the seething waters of the cañon below; and also to enjoy a series of free band concerts, which were

provided by the electric railway people, in the picnic grounds. These promenade concerts proved very attractive, especially to the young people of the vicinity, and to the visitors at the hotels in the neighborhood of the Park. They were held in the large rustic pavilion, which with the grounds around it were brilliantly lighted up by electricity.

The year has been distinguished by the number of very large excursions coming to the Park, and it is stated that every Canadian excursion to Niagara Falls during the past year rendezvoused on the Canadian side. When it is borne in mind that only a few years ago all Canadian excursions went to the American side by preference, owing to the greater convenience there found for reaching the Reservation from the railway stations, it is manifest that the Commissioners have been more than justified in providing the excellent means of access to the Park premises now afforded by the electric railway system.

This year, more than ever, we have been troubled by crooks and pickpockets following the large excursion parties, and it required every effort of our police force, aided by the members of the Ontario Police, to protect the visitors from loss. Notwithstanding the large numbers present throughout the midsummer months, of all classes and conditions, good order has been maintained throughout

Outside of the Park proper a considerable amount of clearing up has been done along the top of the river bank between the Park and Queenston. All of this territory has been entirely neglected in the past; and it will take considerable work to restore it to fair order and condition.

Brock's Monument, and the grounds connected therewith at Queenston Heights, having been vested in the Commissioners for park purposes early in the season, possession was taken and the work of clearing off and improving the property was commenced immediately. It was found that the premises were much in need of attention; and a very considerable amount of work has been expended upon it during the year. A new pathway for pedestrians was opened up from the station of the electric railway to the summit of the Heights, and the southern face of the hill between the highway and the summit was cleaned up, all decayed or unseemly wood removed, and the place generally put in good order. A supply of drinking water has been piped from Brock's Spring, a beautiful, clear, cool and never-failing fountain, which gushes out of the limestone a few feet below the top of the Heights about a quarter of a mile or so west of the monument down to a convenient place on the hillside opposite to the refreshment booth, where a tap with suitable drinking cups has been provided, and a platform for a rustic arbor has been erected. A good deal of attention has also been given to opening up vistas at various points along the edge of the escarpment, and the thick tangle of red cedar on the summit and upon the face of the hill has in many places been removed in order to give space for the growth and development of other and more symmetrical forms of trees.

On the west side of the monument grounds the lands belonging to Sir Casimir Gzowski, embracing some twelve and a-half acres in extent, and upon which stand the earthwork redoubts built during the war of 1812, having been acquired by the Commissioners, a new driveway for carriages entering from the highway leading down from Niagara Falls was laid out, and being approved, was constructed in a most substantial manner.

Along the front of the property the unseemly picket fence which enclosed it from the highway was removed and a new turned post and looped chain fence put up in its place; this has been extended from the westerly limit of the new purchase down as far as the electric railway crossing, and opens up the premises to view in a marked degree.

Nothing has as yet been done toward restoring the earthwork redoubts, or towards preparing the grove in the new territory for the purposes of a picnic and recreation ground.

Along the upper reach of the river, between Chippawa and Fort Erie, nothing has been done towards preventing the erosion of the shore where it is exposed to the action of the waves during high water, or the cutting or grinding of the ice in winter and spring. Until some steps are taken on a comprehensive scale to secure the shore from further wasting, any efforts at planting out or improving the property would be superfluous.

Notwithstanding the many improvements made to the upper reaches of the Park proper, the receipts from visitors for driving over the islands has again diminished and only amounted for the year to $1,385.20, as the following tabulated statement will show :—

Receipts in 1895.	Island tolls.	Brock's monument.	Rentals.	Interest.	Sundries.	Totals.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
January	14 50	.....	2,050 00	.....	.....	2,064 50
February	25 00	.....	.....	.....	.....	25 00
March	22 25	.....	.....	.....	.....	22 25
April	39 50	.....	4,550 00	.....	.....	4,589 50
May	77 25	17 85	12,500 00	93 92	.....	12,689 02
June	174 75	36 40	.....	18 38	.....	229 53
July	228 50	79 35	4,550 00	.....	.....	4,857 85
August	302 75	111 95	.....	.....	82 17	496 87
September	275 70	53 00	2,500 00	.....	47 58	2,876 28
October	143 50	10 20	2,050 00	.....	.....	2,203 70
November	54 50	.....	12,500 00	58 47	1 00	12,613 97
December	27 00	.....	2,500 00	.....	1,003 50	3,530 50
Total	1,385 20	308 75	43,200 00	170 77	1,134 25	46,198 97

The expenditure for the year has been as follows, viz.:

New Works on Capital Account.

The Queen Victoria Niagara Falls Park	$7,241 16	
North of the Park and including Queenston Heights	4,517 60	
		$11,758 76

Works of Maintenance.

The Queen Victoria Niagara Falls Park	$14,110 11	
North of the Park and including Queenston Heights	229 50	
		14,339 61
		$26,098 37
Bond interest and charges		24,227 50
Total expenditure		$50,325 87

The whole respectfully submitted.

JAMES WILSON,
Superintendent.

Niagara Falls, February 1st, 1896.

REPORT

OF THE

ONTARIO

GAME AND FISH COMMISSIONERS

FOR THE YEAR

1895.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY

TORONTO:
WARWICK BROS. & RUTTER, PRINTERS, 68 AND 70 FRONT ST. WEST.
1896.

REPORT

OF THE

ONTARIO GAME AND FISH COMMISSIONERS

FOR THE

YEAR ENDING DECEMBER 31ST, 1895.

His Honor the Lieutenant-Governor of Ontario:

SIR,—In presenting this the fourth annual report, the Commissioners have endeavored to bring together in a form as concise as possible, all matters pertaining to their department. The reports of the Wardens indicating the work done by them during the year are given as well as other matters which it is hoped will prove interesting.

The Commissioners are pleased to be able to congratulate the Government upon the remarkable success which has attended the working of the Game Laws, for not only are they becoming more popular as they are becoming better known, but the farmers, those most largely interested, hail them as a means of keeping idlers and poachers from trespassing upon their lands, trampling down their crops, and killing off great numbers of useful insectivorous birds which are the farmers' best friends. The Sabbath, which before the present Act came into force was often chosen as the day for hunting, is now seldom or never desecrated except, perhaps, in some of the most remote parts of the Province.

WARDENS.

The Commissioners are pleased to be able to testify that the Wardens have done much valuable work during the year, especially have they been efficient in preventing violations of the Act in the northern sections of the Province where the temptation to kill deer both before and after the open season is very great. In fact, these men have been unremitting in their efforts to enforce the provisions of the Game and Fish Laws thus earning directly for the people of the Province many times their salary. Of course much more efficient work could be done if the number of Wardens were greater, for, owing to the great extent of territory which each Warden has to protect, it is utterly impossible that every violation can be detected and punished. They have also made it their business to see that the provisions of the Insectivorous Birds Act are carried out, although this is not strictly a part of their duty yet it is quite in their line of work and it is done by them for the great good it will accomplish.

DEPUTY WARDENS.

There is now about 460 of these men, a force, if efficient, large enough to make the protection very successful, but, while there are a number of good and painstaking officers among them, the majority simply do nothing. They give as an excuse

for their inactivity that they gain very little pecuniarily even in a successful prosecution while they risk the loss of a good deal by offending neighbors, and if they should fail to obtain a conviction they are mulcted in the amount of costs which most of them are unable to bear, there being no provision by which they are recouped. The Commissioners think that some plan might be devised by which the Deputies would not be deterred from doing their duty through fear of the expense in case they are unsuccessful, it may be before an unfriendly magistrate.

Game in Ontario.

Although the enforcement of the Game Laws has had an undoubted effect in preserving the game during the last three or four years the Act might be made much more protective by restricting the number of birds to be taken or killed by any person in a day or year, for instance in the case of duck, if it were enacted that not more than twenty should be taken in a day or 300 in a season it would nave a good effect. The same plan might be adopted with reference to the other game birds, quail, snipe, woodcock, and partridge. The Commissioners are pleased to know that the Long Point Company have set the laudable example to other clubs by making a by-law that not more than 500 ducks shall be shot on their reserve during a season by any member; formerly as many as 2,600 ducks have been taken by one gun in a season. The Long Point Club are no doubt induced to this action by the observation that there is an undoubted decrease in the number of deep water ducks as the redhead, bluebill or scanp ducks. Wood duck, too, are becoming scarce.

There is an increasing feeling among sportsmen that further and greater efforts must be made in the near future looking towards the restocking of game covers, and quail seems to be the only bird which offers a fair compensation for the outlay of time and money. As is well known, none of the other native game birds admit of propagation so that restocking with them is out of the question. Some ardent sportsmen have introduced the Mongolian pheasant and also the English pheasant but sufficient time has not yet elapsed in which to test the success of the experiment.

The Commissioners are strongly of the opinion that Algonquin Park offers a most favorable opportunity for the introduction of the capercailzie and black grouse. These birds are natives of Norway and Sweden as well as the Highlands of Scotland, where they do well in the pine forests and other covers. The capercailzie is the largest of the grouse family, weighing as much as ten or twelve pounds and of excellent qualities for the table. The black grouse is not so large, averaging only about three pounds in weight but quite equal to our own ruffed grouse for the table. They have been introduced into the forests of Maine and are reported to be doing well.

Deer.

The Commissioners regret having to report that although the open season was last year shortened by ten days, yet, owing to the insatiable craze of hunters to take part in the sport of hunting this animal before it is finally exterminated, greater numbers than ever have been killed during the late open season. It is estimated by the Wardens who had charge of Muskoka and neighboring districts that fully 3,000 deer were killed there during the fifteen days open season. The chief factor in this unreasonable slaughter is the use of hounds which, to the number of about 800, were let loose upon the deer this season. When dogs are used, and so many hunters are at the same time scattered through the woods, a

deer when once started is almost certainly killed, if not on the runways, then while helpless in the water. If the dogs are stopped there will be little or no slaughtering in the water, which practice does so little credit to the sportsman.

We are of the opinion, too, that hounding during the rutting season is no small factor in rendering the does barren, not to speak of the diseases caused by plunging a tired and overheated animal into ice water.

The Commissioners are disgusted with the details of the wanton slaughter of this noble animal, and they are confident that if greater restrictions are not imposed at once, the deer will in a very short time be an extinct animal in Ontario.

At the annual meeting of the Commissioners the question of hunting deer with dogs was discussed fully and, on a resolution prohibiting their use being submitted, it was lost on a division of three to two. In spite of this, however, there is a decided feeling over the whole Province that the use of dogs causes too great slaughter of this animal and will eventually exterminate it, while, if only still hunted owing to the great expanse of bush and favorable covers for deer in northern Ontario they may still become fairly plentiful for a great number of years. The Commissioners would also recommend that some plan be adopted by which each hunter may be checked from killing or taking more than his quota. The issuance, at a nominal sum, to every hunter of a license with two coupons attached would probably answer the purpose by compelling the hunter to attach a coupon to each of his deer, then any deer being sold or transported without the coupon would be *prima facie* evidence that it was not legally taken and would be liable to seizure.

Insectivorous Birds.

The Commissioners do not consider with pleasure the fact that a number of permits granted to take birds for their skins and to collect their eggs has reached the unreasonable number of sixty-eight for the year. In view of the rapidly decreasing number of our native birds, nine-tenths of which exist only to enhance the beauties of nature and to destroy myriads of noxious insects and weed seeds, it is to be deplored that a force of sixty-eight collectors should be let loose upon these inoffensive creatures to collect their skins throughout the whole year and their eggs during the breeding season, and not only for their own use in study, but also for foreign exchange as well as exchange at home. It should be remembered that the plumage of birds is finest during their mating or breeding season consequently it is then that the collector gets in his work. It should be remembered, too, that often a great many specimens are killed before one is secured fit for mounting or making a good skin, and, when it is considered that at this particular season nearly all have nests or are mated, some idea of the destruction of our valuable and beautiful insectivorous birds may be estimated.

The Commissioners would recommend that greater care still be exercised in the issue of these permits inasmuch as they fear that in some cases at least the skins and eggs are being made articles of trade. The example set by some of the neighboring states should be followed in which very few of such permits are granted. Maine, for instance, only grants ten in any one year.

Fisheries.

Still the question of jurisdiction over Provincial waters remains unsettled, and, as a consequence the usefulness of the Commission is curtailed, for immense tracts of depleted waters could be very profitably restocked and thus a cheap and

wholesome food furnished the public. The Commissioners would urge that, if possible, the Government should take such steps as would force a settlement of this delayed question.

The Commissioners have to report that vast numbers of pickerel were, during November, thrown upon the north shore of Lake Erie apparently throughout its whole length. A space about four feet wide along the shore was covered with fish of all sizes, averaging about forty to the square yard. They were gathered by the farmers to use for fertilizing purposes. In order to verify the cause of such an immense loss of valuable fish the Commissioners sent samples of the diseased fish to Dr. R. R. Gurley, of Clark University, Worcester, Mass., who recently held the position of specialist in diseases of fish on the U. S. Fish Commission. His answer was that he found minute tumors upon the filaments of the gills containing scores of *myxosporidia*, a fish parasite, very contagious and very fatal. The disease often appears as patches of moss or fungus on any part of the body. The fish, in this epidemic, principally affected is *stizostedion vitreum*, wall-eyed pike, dory, or yellow pickerel. There were also a great number of large water lizards, *necturus maculatus*, washed ashore.

Chief Warden.

Since the last report a successor to the late Chief Warden has been appointed in the person of Mr. Edwin Tinsley, of Hamilton, and there is good reason to say that he has been painstaking and efficient. His whole time being devoted to the work he is better able to accomplish the duties of his office and other work than if only paid for part of his time as seemed to have been the case with his predecessor.

The Commissioners are also of the opinion, that in order to start the nucleus of a collection of mounted specimens of the game and fish of the Province as well as of other rare and curious specimens of natural history, the Chief Warden should intimate to sportsmen and others his willingness to receive and have mounted by the best ttaxidermists such specimens as they may be pleased to donate. They are confident that a large number of valuable specimens could be thus secured. These could be kept in the office of the Chief Warden until their number would warrant a room or rooms being set apart for their accommodation.

Customs Officials.

The Commissioners regret that the customs officials stationed on the frontiers of the Province do not seem disposed to assist our officers in preventing the export of game killed in the Province and shipped by dealers and others. They are always on duty and could do a good and patriotic work if they would.

Proposed Amendments to the Game Act.

The Commissioners are constantly receiving many suggestions from sportsmen and others which, in their estimation, should be embodied in the Act. They are convinced, however, that, after giving these propositions due consideration, it is not best to advise too many changes and have resolved to recommend as few amendments as possible. There are a few amendments, though, which appear absolutely necessary in the interests of the Province that the Government should give its best attention to, viz:—

1. Sec. 4. The following sentence be added: No person shall use any floating battery, skeg, monitor or other device whereby the gunner is concealed for

the purpose of killing any of the above waterfowl or shoot out of any such floating battery, machine or device at any wild goose, brant or duck in any of the waters of this Province, or use any decoy or construct any bough-house or blind at a greater distance than fifty yards from the shore or natural point of rushes connected with the shore for the purpose of shooting at or killing any such birds.

2. Reinsert Subsection three in Section three.

3. Section four, Subsection two, leave out the words "half an hour after" and "half an hour before."

4. Provide that every person about to hunt deer shall take out a license for the season at a nominal fee to which two coupons are attached. That each person shall attach one coupon to each deer or part of deer shipped by him, and said coupon shall be signed and detached by the person to whom the license is issued in the presence of the shipping agent at the point of shipment.

All of which is respectfully submitted,

G. A. MacCALLUM,
Chairman, Ontario Game and Fish Commission

DUNNVILLE, 31st December, 1895.

REPORT OF THE CHIEF GAME WARDEN.

Toronto, December, 1895.

G. A. MacCallum, Esq., M.D.,
Chairman, Fish and Game Commission.

Sir,—I herewith beg to submit statement of the work of the department for the year ending December 31st, 1895.

During the year the Game Laws have been consolidated and issued in pamphlet form, more than three thousand copies have been distributed. The newspapers of the Province without exception, have rendered the department most valuable assistance in publishing copious extracts from the Game Laws, and by so doing, have brought the question of game protection prominently before the public. The work of the department has increased to such an extent that the energies of the wardens and myself have been taxed to enable us to keep up with the requirements of the department. The usual statements will be found in this report which, I hope, will be interesting and satisfactory.

Wardens.

Too much cannot be said in behalf of the four gentlemen associated with me, to whom I am under an obligation for their most valuable and efficient assistance, at times rendered under very trying circumstances. The Province is still divided into five districts, one of thirteen counties under the direct supervision of the Chief Warden, which, in addition to my other duties, has only received very imperfect supervision.

Deputy Wardens.

The number of Deputy Wardens has increased from 445 in 1894 to 466, many of them having done good work, others being indifferent and of little service to the Commission. The alleged reason for this indifference, is, that failing to secure convictions, they have to pay the costs, many of them not being in a position to do this.

Game Laws.

It affords me much pleasure to report that the Game Laws are becoming more generally respected, sportsmen evincing a disposition to assist the department in enforcing the Game Laws and bringing offenders to justice. Many prominent sportsmen are in favor of a gun license, believing that such a measure would be popular and a powerful factor in game protection.

Game in Ontario.

I regret having to report that, from various causes, quail are not increasing to the extent we had reason to expect. Partridge are increasing and have afforded excellent sport in all parts of the Province. Duck shooting, in consequence of the unprecedentedly low water in the marshes, has not been satisfactory to those owning or controlling preserves. Market hunters have had no cause to complain. They have killed immense numbers of duck with a contrivance combining all the destructive qualities of the sunken punt. This device in some localities is

known as a skeg, in others as a monitor. These contrivances or boats should not be allowed to anchor for shooting purposes more than one hundred yards from shore. Steam and sailing yachts should be prohibited from use in any capacity in connection with duck shooting, they having been used to a large extent during the past season in evading the Game Laws. The practice has been to take a number of boats in tow and steam or sail out into open waters, the shooting being done from the boats in tow.

The concessions made in allowing shooting half an hour before sunrise and half an hour after sunset, having been grossly abused, no shooting should be allowed before sunrise or after sunset.

From the immense number of deer killed during the open season, it is evident that measures must be taken to restrict the slaughter, or deer in Ontario will soon be, like the wild turkey, a thing of the past. This slaughter can be restricted by prohibiting the hounding of deer for some years. The absence of fawns and the large number of barren does killed this season, is a warning that should not be neglected. It is too much to expect that does chased night and day by hounds, for two or three weeks at that particular season, can be prolific. I have reports to the effect that moose are increasing to some extent, which must be satisfactory to those interested in preventing the extinction of the monarch of the forest.

A matter of great import to which I take the liberty of drawing your attention, is one of a missionary character, namely to send a competent man well versed in the Indian language, to make a tour of the Indian reserves in the northern portions of the Province, for the purpose of convincing the Indians that they are acting very foolishly and much to their own detriment, in the useless and indiscriminate slaughter of game.

I also desire to draw your attention to the necessity of some measure being adopted that would enable the Wardens and Deputy Wardens to have some check on the number of deer killed by hunters. I know of no method so effective as that in use in the State of Michigan There no person is allowed to shoot deer without having first procured a license, the price of which is fifty cents. Attached to such licenses are coupons, one of which must be attached to each carcase or parts of such, before legal shipment can be made. Deer or parts of such found without such coupons attached, are confiscated.

I also suggest that the Game Laws be so amended that severe penalties be inflicted for shooting deer in the water. The work of the Commission would be far more effective if the Chief Warden and Wardens had the same pnwer conferred on them as those conferred on Liquor License Inspectors, enabling the Wardens to inspect suspected establishments without procuring search warrants. If this course is not practicable, then game dealers should be licensed before being allowed to deal in game, thus bringing them under direct Government supervision. It has been found necessary to do this in England. While we are far in advance of our American neighbors in the question of spring shooting, we are lagging far behind them in the barbarous system of hounding deer. Many of the States have made it unlawful to hound deer, and nearly all the American papers devoted to field sports, are agitating in favor of abolishing this barbarous and cruel practice.

Insectivorous Birds.

Permits to take insectivorous birds and their eggs, have been issued to the number of 68. Even this number could be reduced with advantage. Great care has been exercised in the issuing of these permits to prevent professional dealers and bird catchers, obtaining them.

Fish.

The vexed question of jurisdiction over the fisheries of the Province, is still in abeyance. This is a matter of great importance and should be decided without delay. In consequence of the divided responsibility, the Deputy Wardens of the Province are unable to enforce the Fishery Laws, and the result is, the destruction of this most valuable article of food and commerce.

Shooting Licenses.

There have been sixty shooting licenses issued to foreign sportsmen; the same number as last year. The names of those to whom licenses were issued are embodied in this report.

I beg to suggest that on presentation of shooting licenses issued by the province, that the holders of such licenses should be allowed by the Custom Officers, to export the two deer in accordance with the Game Laws of Ontario.

I have the honor to be, Sir,

Your obedient servant,

E. TINSLEY,

Chief Warden.

BEAUMARIS, December 20th, 1896.

E. TINSLEY, Esq.,
Chief Warden.

SIR,—I beg to submit to you my annual report in respect to the Game and Fish in the districts of Muskoka, Parry Sound, Nipissing, Algoma, and the County of Simcoe.

DEER.

It is gratifying to note the respect in which the law continues to be held in most sections, and also the increase in these animals, except in certain sections where hunters come in numbers. These places will in a short time be cleared out, unless something is done to stop the slaughter. There is the strongest feeling among fully ninety-five per cent of the settlers to prohibit the running of hounds entirely, and on enquiry I have been surprised to find some old hunters, who have been accustomed to run dogs all their lives, reciprocate in this feeling. This I believe to be the only method of preserving the deer. I have noticed numbers of deer during the past season which have been shot through the head, which clearly proves that they were killed in the water, and this no doubt after a long chase. There is no denying that the meat under these circumstances would be much inferior to that of animals killed still hunting. The butcher or farmer would be crazy to dog a beast an hour before killing it, on account of the meat being affected by so doing. The result in the case of deer so treated must naturally have an effect on the meat. As for sport, a deer killed still hunting, when a man has to pit his cunning against that of the deer, affords true sport, whereas it is a cowardly and cruel action to take advantage of a helpless animal in the water. Should hounding be stopped, the open season might safely be lengthened, and not half as much slaughter would occur, but should it still be permitted it would be wise to shorten the season.

Lumbermen.—Many of them I am pleased to see, have been careful not to have infractions committed in their camps, and have gone so far as to post up prohibitory notices in such camps. To them our thanks are due for helping in the good cause. There are, however, exceptional cases where infractions have occurred, and should these cases on investigation be proved, prosecutions will most assuredly follow. In spite of the shortening of the open season this year, many more deer have been killed than last year; I estimate that between 1,200 or 1,500 have been taken out of these northern districts this year, against 1,000 to 1,200 last year.

Moose are reported on the increase, especially in Algoma. There is no doubt, however, that many of these animals are killed by Indians.

Partridge have been more plentiful this season than for a number of years past, the nesting season having been most favorable for young broods.

Deputy Wardens.—Some of these I am pleased to report, have rendered most efficient service, and several good men have been added to our lists. Many of these men, however, hold aloof from prosecuting cases for fear of failure to procure convictions and consequently loss in costs to themselves.

The presence of special patrols during the hunting season had a most salutary effect and several convictions were obtained by these men. The fact, also, that Provincial Detectives Rogers and Greer were on the scent, had an additional good effect, and I would urge that the latter should be employed on the same work in future open seasons.

Fishery Laws.—There laws are fairly observed; apart from a few cases of netting and depositing mill rubbish in streams, there have been very few violations. An early settlement of the question of jurisdiction over the inland waters, now at issue between the Dominion and Provincial Governments, would be most welcome to all the Wardens, for at present we are somewhat handicapped. The Game Act of 1893 and subsequent amendments which you have printed in pamphlet form, has supplied a long-felt want. I have had during the past year twenty-two cases, fifteen convictions, and seven dismissals, as you will see by returns. I have endeavored to curtail expenses as much as possible, but on account of these districts being so extensive, and most of the travel being necessarily by horse conveyance, the expenses are unavoidably high.

I have the honour to be, Sir,

Your obedient servant,

J. H. WILLMOTT,

Warden.

BELLEVILLE, 31st December, 1895.

E. TINSLEY, Esq.,
Chief Warden.

SIR,—I have the honor of submitting my fourth annual report, as Warden for the eastern district, for the year 1895.

The hunting season just closed has been a very successful one for the hunters and corresponingly destructive to the deer. It is quite apparent that the number killed during the past season has been largely in excess of any previous season since the establishment of the Commission, and although the open season was shorter, by nearly one-half, than the previous one, it has completely failed to give the protection that was expected, and which is so desirable, and further restrictions will have to be put upon the killing of these animals, if their extermination is to be prevented.

Partridges seem to be quite plentiful in nearly every locality, and it is thought, are gradually increasing in number, while the law prohibiting the sale of them is universally approved,

Ducks do not appear to have been so numerous as formerly in this part of the Province, although the pursuit of fall ducks has been fairly successful. Complaint is still being made respecting the use of floating blinds, monitors, etc., and as I stated in a former report, no proper definition of them can be had and it is therefore impossible to obtain a conviction against parties using them, and I am still of the opinion that the law should be amended, so that hunters would be compelled to erect their bough-houses and blinds within a reasonable distance of the shore or rush beds.

With respect to the fur-bearing animals, I regret to say, that little or no attention is paid to the law in the most northerly part of the Province, and it is said that beaver and otter are taken whenever they can be found. The fur of the mink is becoming more valuable, and I am of the opinion that a close season should be established for them, provided that the section did not apply to persons killing them in, or about, their own premises when there is a probability of damage being done by them.

Respecting Deputy Wardens, I regret to say that many of them are worse than useless, as they do not act but still keep the appointment, and we are therefore under the disadvantage of not knowing whether we have an officer in certain localities or not. I do not wish to be understood as condemning the whole of them, because there are some who devote all the time they can afford to the work.

Infractions of the law have been of frequent occurrence during the year, but it is gratifying to know that the better class of our citizens have no sympathy with the violators, and they are at last awakening to the fact, that if game protection in Ontario is to be a success, it must have their active assistance.

I have the honour to be, Sir,
Your obedient servant,

H. K. SMITH,
Warden.

LEAMINGTON, December 31st, 1896.

E. TINSLEY, ESQ.,
Chief Game Warden.

SIR,—I have the honor of submitting to you my annual report as Warden for the western district.

In consequence of spring duck shooting being allowed by the Game Laws of Michigan, there is much dissatisfaction expressed by Ontario sportsmen residing in this district, who, though opposed to spring shooting on principle, do not like the idea of protecting the ducks for Americans to shoot.

Some dissatisfaction prevails regarding the open season for woodcock. Many sportsmen claim that in this district the woodcock migrate at the end of September, and that the open season should commence some weeks earlier.

I had some difficulty in preventing Americans violating the Game Laws in consequence of the extent of the frontier, a few cases having come to my knowledge of non-residents having entered the Province for the purpose of shooting without having taken out licenses as required. In two cases with your assistance I was enabled to collect the license fees from residents of Detroit. There is another case still pending.

I would suggest that the customs officers should not permit any non-residents to enter the Province for the purpose of hunting or shooting without having a license issued by the Province in their possession. Much credit is due to Mr. George Gott, Customs Collector at Amhertsburg, for not allowing Americans to bring their guns into the Province unless they had a license, issued by the Province of Ontario, in their possession.

Few complaints of the infractions of the Game Laws have reached me along the frontier, in consequence of the very efficient aid rendered me by the Provincial Police in general, and especially by Detective Campeau, who has rendered me most valuable assistance.

The most difficult poachers we have had to contend with are those using steam yachts Having great speed they continue to be a source of great annoyance to law-abiding sportsmen; these yachts being used for the purpose of driving the ducks from their feeding grounds.

Many misleading and untruthful reports that have appeared in the newspapers of alleged violations of the Game Laws, when investigated proved to be without foundation.

In August last I was instructed by you to enquire into complaints made against Mr. F. Martin, residing on Government property at Mitchell's Bay. Mr. Martin, it was alleged, was harbouring poachers and lawless characters from the United States. I found these statements were not sustained by facts. Three American yachts, containing fishing parties, were anchored in the vicinity, and a number of fishermen were boarding at Martin's, all having licenses or permits to fish, procured from the Dominion Fishery Inspector at Mitchell's Bay. I was informed that the complaints against Mr. Martin were made in consequence of one of his sons being suspected of poaching on the property of the St. Ann's Club. The young man denied being guilty of wrong-doing, and I was unable to dispute his statement.

In conclusion, I am pleased to state that the Game Laws are becoming more observed and respected, many sportsmen taking an active interest in enforcing them.

I have the honor to be, Sir,

Your obedient servant,
F. C. QUALLINS, Warden.

DUNNVILLE, December 31st, 1896.

E. TINSLEY, ESQ.,
Chief Warden.

SIR,—In submitting this, my fourth annual report, I find that I have but little to say that has not been mentioned in my former reports, excepting, indeed, the changes that I would urgently recommend to be made in the Game Act.

Shooting birds half-an-hour before and after sunset cannot be properly prevented, and the time should be changed back to sunrise and sunset. Cottontail rabbits should be also put under the close season with the white hare, if the Wardens are expected to control the preservation of partridges and quail during the winter months. As it is now, we find men roaming through the haunts of these birds, with dog and gun, under the pretence of hunting the cottontail, and unless we can find the birds in their possession we are powerless in the matter, while we are satisfied that many of them are more or less guilty of infractions by shooting anything they can get and smuggling it away. Also, an additional clause is urgently needed in the Game Act, making shooting of all waterfowl from hides and covers of any description, either moveable on, or fixed out in the water, illegal, and confining all such hides, covers, and other deceptions to be erected on dry ground, and all shooting of game birds on any waters to be confined to ordinary row boats and canoes.

I have found that this, or some similar addition to the Act, urgently needed to define what methods of shooting on the water are to be allowed, and what condemned. As there are so many shady devices now in use, it is very hard to tell just what is right and what is not.

The devices complained of most are hides, covers, floating blinds, masked boats, skegs or monitors, all used on the water and movable from place to place, as much as two miles from shore. Parties using the above named means get a great advantage over others who think such means should not be permitted.

During the open season for deer I was called upon to assist Mr. Willmott in his district. Proceeding to Toronto on the 29th October, and accompanying the special train provided for hunters to all main points in the hunting districts, afforded the opportunity of gaining certain valuable information relating to my work in the district, which I duly accomplished. Arriving in Orillia, I remained over there awaiting the next hunters' special. While there I made a seizure of certain game, the particulars of which I sent you at the time. The next train loaded with hunters arriving here on Monday morning, I accompanied to Gravenhurst, and taking the boat for Beaumaris, where I met Mr. Willmott we arranged our campaign for the open season, which I need scarcely say as you are aware, resulted in much good to the cause. Many of the oldest and best sportsmen also expressed themselves as being well pleased with our determination to enforce the law on all equally alike, and willingly gave any information we required. We also found the inhabitants of both town and country a unit in desiring the strictest possible enforcement of the Act for the protection of deer, moose, etc., the greatest drawback to this end being the lumber camps, whose managers purchase the deer from unprincipled pot hunters when their supplies of beef run short, as it sometimes does.

The foreign sporting element were not very numerous, and all found without licenses were promptly supplied with the same, either by myself or Mr. Willmott the particulars of which you were duly informed of at the time.

We found that deer and moose had become much more numerous this season, but this is offset by twice the number being killed and taken out of this district I noted all the deer I saw killed and they amounted to five hundred and sixty-four, nearly all of which were sent south. There were between five and six hundred more taken and kept within this district by the inhabitants and Indians, making in all a total of nearly twelve hundred. The number of hunters this season was fully one-half more than last year. It can easily be seen that the deer cannot long stand this increased annual slaughter without becoming greatly reduced in numbers It is the unanimous opinion of all hunters with whom I conversed, that the open season should be reduced to ten days, or the use of dogs for hounding deer prohibited. Partridge and quail remain about the same as last season, the past winter being somewhat severe on quail.

Duck, during the past winter, were very plentiful on the open waters of the Grand river, but they proved somewhat scarce at the opening of the season. Snipe, plover, and woodcock averaged about the same as other seasons, being scarce in some sections and more plentiful in others. Black squirrels were also plentiful, but the grey squirrels were scarce.

The Game Act is growing greatly in popular favor with all concerned in the preservation of game and fur-bearing animals.

I have the honour to be, Sir,

Your obedient servant,

J. A. GILL,

Warden.

SHOOTING LICENSES ISSUED TO FOREIGN SPORTSMEN, 1895.

C. C. Hill	Detroit, Mich.
W. J Highame	" "
M. M. Stanton	" "
J. B. McKay	" "
C. B. Hubert	" "
D. McLean	" "
C. H. Hutchins	" "
M. P. Hutchins	" "
J H. Walker	" "
T. Beath	" "
S. A. Baugh	" "
G. H. Lathrop	" "
A. E. Brush	" "
J. H. McMillan	" "
H. G. Meredith	" "
W. P. Hutchins	" "
L. Curtis	Boston, Mass.
W. H. Forbes	" "
H. B. Cabot	" "
L. Cabot	" "
G. H. Richards	" "
A. Hemenway	" "
A. T. Cabot	" "
G. N. Smalley	" "
L. D. Smalley	" "
J. H. McAfie	Allegheny, Pa.
S. H. McKee	" "
H. McAfie	" "
W. Baird	" "
J. W. Davidson	" "
C. H. Voight	" "
A. M. Voight	" "
J. D. Kanrman	Buffalo, N.Y.
D. J. Constantine	" "
D. H McMillan	" "
W. M. Healy	" "
J. W. Grove	Pittsburg, Pa.
J. W. Collins	" "
H. B. Dickerman	New York City.
D. E. Seybie	" "
W. J. Hickney	" "
W. H. Nichols	" "
G. Baumler	Wyandotte, Mich.
B. C. Bishop	" "
H. Hathaway	New Bedford, Mass.
T. H. Hathaway	" "
J. J. Stanley	Cleveland, Ohio.
H. Hathaway	" "
C. H. Hayden	Alexandria Bay, N.Y.
W. Massey	" "

SHOOTING LICENSES ISSUED TO FOREIGN SPORTSMEN, 1895.—*Concluded.*

C. J. Hudson	Alexandria Bay, N.Y.
J. S. Thompson	Tonawanda, N.Y.
W. Gomhert	" "
L. Dorieon	Oswego, N.Y.
S. C. Conde	" "
C. A. Smith	Lockport, N.Y.
D. Sage	Albany, N.Y.
J. G. Dillon	Radnor, Mass.
J. Bedore	St. Clair, Mich.
J. T. Lord	London, England.

List of Deputy Wardens by Counties, 1895.

Algoma.

Anderson, Alexander	Pearl River, C.P.R.
Brown, Frank	Port Arthur.
Bole, Duncan	Sault Ste. Marie.
Black, Andrew	Richard's Landing.
Cosgrove, Geo. (care of Hugh Munro)	Port Arthur.
Emmons, John	Rat Portage.
Fraser, D	"
Geddes, Thos. R.	Jack Fish Bay.
Gilmour, Wm	Sault Ste. Marie.
Gardiner, J	Rat Portage.
Harris, John	Sault. Ste. Marie.
Higgins, Wm	Thessalon.
Little, J. T	Iron Bridge.
McKewen, S. R	Tehkummah.
McKirdy, William	Nepigon.
Piche, John	Sudbury.
Patterson, M. J	Webbwood.
Riley, Edward	Port Arthur.
Rush, Robert	Sault Ste. Marie.
Reid, W. D	Thompson.
Smith, Alfred Bird	Schrieber.
Whalen, Joseph	Port Arthur.
Woods, J. M	Thessalon.
Kemp L	Silver Lake, Manitoulin Island

Addington.

Donaldson, William J	Donaldson's Mills.

Bruce.

Armstrong, Joseph	Kinloss.
Barley, Edward	Lion's Head.
Farquharson, John	Teeswater.
Gardiner, Jno. H	Lucknow.
Grey, Wesley	Chesley.
Henry, George	Port Elgin.
Henderson, James	Kincardine.
Heffernan, Patrick	Walkerton.
Hogg, Wm. W	Paisley.
Lawson, W. H	Park Head.
Millions, Robert	Walkerton.
Manly, David	Riversdale.
McKillop, Hugh	Hepworth.
McIvor, John	McIvor.
McFarlane, Duncan	Red Bay.
McDonald, Donald	Ripley.
Pratt, John	Kincardine.
Richards, Chas. A	Tara.
Scott, John	Dyer's Bay.

Brant.

Montgomery, C. A	Brantford.
McGlaughlin, Geo. W	"
Irving, Robert P	Glenmorris

Carleton.

St George, George	Ottawa.

Dufferin.

Durkin, Wm	Bowling Green.
Gordon James	Monticello.
Hubbard, James J	Orangeville.
Marshall, James E	Shelburne.
Rowbotham, Wm	Redickville.
Stewart, Wm	"

Durham.

Hales, Hugh B	Port Hope.

Dundas.

Cameron, Lachlin	Iroquois.
Price James	Inkerman.

Elgin.

Fairbrother, Wm	St. Thomas.
Fowler, Jacob	Fingal.
Hannen, Isaac	Union.
Hopkins, John	St. Thomas.
Huffman, Jeremiah	Aylmer.
Hammond, John	"
Kirkpatrick, Donald	West Lorne.
Miller, Robert	Lawrence Station.
Neely, John R	Fingal.
Philpott, Wm. J	Iona.
Thornton, Henry	St. Thomas.

Essex.

Outago, Daniel	Petite Cote.
Banks, Anthony	Harrow.
Britt, G.	Wheatley.
Cornette, Chas. F	Belle River.
Campbell, Duncan C	Staples.
Feller, Wolfe	Walkerville.
Gignac, Hilliare	Gordon.
Gormley, John	Essex.
Holland, Hugh	Comber.
Hillman, Jonas	Hillman.

Ives, Arthur	Leamington.
King, George	Ruthven.
Lindsay, William	Comber.
Lemaitre, Seraphrim	Tecumseth.
Marters, Allios	Sandwich.
Meloche, Joseph	"
Robert, Joseph	"
Rivard, Napoleon	Tecumseth.
Soulliere, Stephen	"
White, James H	Pelee Island.
Walker, Nol	St. Joachim.
Louchereau, Stephen	St. Clair Siding.
Mills, Chas	Wheatley.
Reid, R.	Blythewood.

Frontenac.

Albertson, George	Verona.
Brickwood, James H	Kingston.
Burke, Robert, jr	Clarendon Station.
Clark, Norman	Mississippi "
Darcy, Sydney W	Murvale.
Dermott, J. A	Tichborne.
Dowker, Wm. S	Harrowsmith.
Gilbert, Robert	Ompah.
Gates, George	Westbrook.
Greenwood, George	Wolfe Island.
Halliday, F	Mississippi Station
Martin, John	Barriefield.
Pallier, Alexander	Wilmur.
Snooks, Edward H	Desert Lake.
Smith, David John	Parham.
Sly, Henry	Verona.
Tryon, Levi	Sharbot Lake.
Tallon, James	Arden.
Theobald, John M	Kingston.
Vaness, Marshall	Harlow.
Walker, Nelson	Cataraqui.
Woods, J. M	Arden.
Woodman, W. G	Allen (Wolf Island).
York, E. M	Bellrock.

Grey.

Campbell, Malcolm	Hanover.
Holmes, Geo. B	Walter's Falls.
Long, William	Kolapore.
Simmons, M. H	Oxenden.
Leigman, Ludwig	Neustadt.
Wilson, Wm. H	Shouldice.
Myers, J	Orchard.
Smith, R. S	Owen Sound.

Glengarry

Clark, James ..... Dominionville.
Dickson, Daniels ..... Williamstown.
Dunn, Ambrose ..... South Lancaster.
McGillvray, Donald W ..... Dalkeith.
McNaughton, J. P ..... Laggan.
McDougall, D. P ..... Maxville.
McRae, Donald C ..... North Lancaster.
Stewart, M. W ..... Greenfield.
Pepin, E ..... Bainsville.

Hastings.

Airhart, Geo. W ..... Stirling.
Adams, George ..... Hermon.
Barr, Peter ..... Maynooth.
Brinklow, Henry ..... Ormsby.
Birrel, James ..... Glanmire.
Bowel, W. J ..... Tweed.
Faulkner, Dr D. W ..... Foxboro'.
Faulkner, Dr. G. W ..... Stirling.
Foster, Alexander ..... Egan Creek.
Mairs, James H ..... Bridgewater.
Reid, George ..... Madoc.
Rupert, Thomas ..... Springbrook.
Stanyer, Thomas ..... Bancroft.
Speck, William ..... Bridgewater.
Sweet, W. H ..... Bancroft.
Sweet, W. James ..... "
Tivy, Richard S ..... Coe Hill.
Unwin, Walker ..... Bannockburn.
Hubbell, B. C ..... Madoc.

Halton.

Bradly, Stinson ..... Milton.
Brown, Robert M ..... Campbellville.
Crawford, Murray ..... "
Grant, Lachlin ..... Georgetown.
Johnson, Walter M ..... Milton.
Lawson, John ..... Acton.
Racey, C. S ..... Milton.
Saunders, Edward G ..... Agerton.
Wilson, James ..... Bronté.

Huron.

Creech, James ..... Exeter.
Dalton, Morgan ..... Kingsbridge.
Gill, John ..... Exeter.
Horton, George ..... Gorrie.
Naftal, Chas. J. S ..... Goderich.
Paisley, Wm ..... Clinton.

Ross, John M	Blyth.
Sands John	Saltford.
Seager, Charles	Goderich.
Scott, Alex	Westfield.

Haliburton.

Day, Joseph	Essonville.
Paul, Joseph	Haliburton.
Turnbull, James	Minden.

Haldimand.

Chrysler, Robert	North Cayuga.
Everingham, Wm	Canfield.
Farrell, John	Cayuga.
Winslow, Martin	Dunnville.

Kent.

Boles, Gordon	Chatham.
Crouch, Samuel	Ridgetown.
Eberts, Frank G	Chatham.
Johnson, W. J	Fargo.
Gardiner, Isaac	Morpeth.
Kime, George	Big Point.
Monday, Frederic	Mitchell's Bay.
Merritt, Asra	Ouvry.
McCollum, Thomas	Morpeth.
Robertson, Victor	Chatham.
Southgate, R. M	Wallaceburg.
Thomas, Joseph	Williams.

Lambton.

Blair, William	Port Lambton.
Bell, John	Port Franks.
Deans, James	Inwood.
Everest, G. M	Arkona.
Huddleston, John	Forest.
Kennedy, Joseph	Port Lambton.
Miller, Frank	Port Franks.
Mott, Edwin L	Alvinston.
Taylor, J. P	Watford.
Mountain, H	Walpole Island.
Sarvis, A. E	Sarnia.

Lanark.

Deacon, Ephraim	Bolingbroke.
Farnall, William	Smith's Falls.
Mair, David	Lanark.
Kirkwood, Jas. W	Levant Station.
Millford, R	Carp.
Patterson, J. R	Christie's Lake.

Leeds.

Bilton, George	Newboro'.
Gibson, John R	Mallorytown.
Lappin, J. J	Westport.
Murchie, Robert	Wilstead.
Smith, Justus	Charleston.
Sly, Lester	Morton.
Sliter, A. E	Morton.
Stone, W	Gananoque.

Lennox.

Huff, Hiram W	Napanee.

Lincoln.

McPherson, James	St. Ann's.
Kennedy, C. A	Smithville.

Middlesex.

McCann, Peter	London.
Beverly, John	Dorchester Station.
Dixon, Michael	Cashmere.
McConnell, Wayland F	Gladstone.
O'Neill, W. H	Dorchester.
Ralph, Thomas J	Ballymute.
Ward, R. W	London West.
Williams, Alfred M	Lobo.
Foreman, J	Dorchester Station.

Monck.

McDowell, Andrew	Stromness.
Moore, Daniel	Perry Station.

Muskoka.

Butler, C. F	Point Kaye.
Brown, Robert D	Port Sydney.
Brooks, Edgar, jr	Huntsville.
Berry, Wm	Walker's Point.
Bettes, J. H	Muskoka Mills.
Bradley, Enos	Beaumaris.
Chapman, Chas. N	Huntsville.
Crompton, W. B	Aspdin.
Dart, Stephen	Dorset.
Davidson, E. M	Brackenrig.
Foreman, Walter	Port Carling.
Gouldie, E. J	Dwight.
Gohm, William	Bracebridge.
Grenke, Gustav	Rosseau.
Henderson, Charles	Bracebridge.

Harborn, Joseph ..... Whitside.
Hey, Joseph ..... Bracebridge.
Lawrence, John ..... Shannon Hall.
McLeod, John ..... Hammil's Point.
Paget, George ..... Huntsville.
Smith, J. D ..... Kilworthy,
Stephens, George ..... Shannon Hall.
Shannon, Peter ..... Port Carling.
Stromberg, Nelson ..... Wood Township.
Traves, Elias H ..... Fraserburg.
Taylor, C. N ..... Gravenhurst.
Thornton, Richard ..... Huntsville.
Wood, Michael ..... Clevelands.
Warne, Francis P ..... Baysville.
Wardell, John ..... Bracebridge.
R. T. Easton ..... Whitoff.
J. Hays ..... Parry Sound.
J. Harrison ..... Whitstone.
R. Smith ..... Golden Valley.
T. Traves ..... Fraserburg.

Norfolk.

Baker, Huit ..... Windham Centre.
Brown, Isaiah ..... Port Rowan.
Barret, A. P ..... Port Royal.
Clark, Benjamin ..... Simcoe.
Duncan, James L ..... Forestville.
Dowswell, John ..... Lynedoch.
Ewing, Alex. B ..... Waterford.
Fick, Jerome B ..... Port Dover.
Hambley, William E ..... Rockwood.
Kramer, Conrad ..... Delhi.
Mickenon, W. F ..... Simcoe.
Randall, Robert ..... Bookton.
Wilson, Abner ..... Lynedoch.

Northumberland.

Diamond, T ..... Cobourg.
Field, Cyrus W ..... Cobourg.
Fairbanks, Chas. S ..... Cobourg.
Merrian, H. N ..... Harwood.
Nimmo, T. J ..... Bensford.
Row, George ..... Carrying Place,
Wedlock, James ..... Bensford.
Wallace, Thomas ..... Gore's Landing.

Nipissing.

Armstrong, John ..... Haileybury.
Bard, T ..... Sturgeon Falls.
Garrow, E ..... Nipissing Junction.

Huntington, S. L. ..... North Bay.
Jessup, Robert ..... Nipissing.
McNab, Donald ..... Nipissing.
Meeks, Mortimer ..... Whitney.

Oxford.

Cuthbert, George ..... Woodstock.
Huntingford, Henry ..... "
Martin Richard ..... "
Tisdale, J. E ..... "
Hobson, J ..... "

Ontario.

Bagshaw, Abed E ..... Vroomanton.
Frankish, F. M ..... Uxbridge.
Hall, Maxwell ..... Langford Mills.
Hadley, James ..... Liverpool Market.
Sniter, James ..... Langford Mills.
Gordon, John ..... Pickering,
Henery, T. S. ..... Cedardale.
Miller, Arthur ..... Seagrave.
McGrath, Michael ..... Brechin.
McMillan, D ..... Beaverton.
McDermott, George ..... Port Perry.
Pettit, George ..... " "
Sutlifil, James ..... Prince Albert.
Williams, Charles ..... Glen Major.
Remey, J. W. ..... Dorset.

Prince Edward.

Lake, Stephen ..... West Lake.
Rorabeck, Athol ..... Crafton.
Sprague, George G. ..... Demorestville

Peterborough.

Hortley, E. J. ..... Peterboro'.
Ludgate, Theodore ..... "
Lambert, Henry ..... Silver Lake.
Moore, F. J ..... Lakefield.
Moore, D. H ..... Peterboro'.
McWilliams, J. B ..... "
Smith, J. W ..... "
Wedlock, William ..... Keene.

Parry Sound.

Burns, C. W. sr. ..... South River.
Butter, Clarence ..... Trout Creek.
Carmichael, Wm ..... Powassan.

Doupe, Sydney ..... Lawrence Mills.
Draycott, F. W ..... Ashdown.
Fry, Arthur ..... Seguin Falls.
French, Benjamin ..... Dunchurch.
Greer, A. J ..... Parry Sound.
Groom, Henry ..... Kearney.
Hollingshead, Walter M ..... Sprucedale.
Hall, Wm. H ..... "
Johnson, John A ..... Parry Sound.
Kennedy, W. E ..... Magnetawan.
LeBrash, James P ..... Maple Island.
Mainprize, N ..... Golden Valley.
Mitchell, Robert ..... Cecebe.
McDonald, Arch ..... Sundridge.
McDermott, G. Benj ..... "
McGowan, Wm ..... Parry Sound.
McAmmond, Wm ..... Dunchurch.
Ricker, David ..... Commanda.
Sloman, Alfred ..... Trout Creek.
King, J ..... Parry Sound.

Prescott.

Bonville, Leon ..... St. Isidore de Prescott.
Barrett John ..... Tournier.
Cunningham, A ..... Wendover.
Ferguson, Wm ..... Vankleek Hill.
James, Richard ..... Alfred.
LaBelle, Leonce ..... Curran.
LeRoy, Ralph ..... Barb.
Lefaivre, Hercule ..... Lefaive.
Marston, Lewis F ..... L'Orignal.
Martineau, Joseph ..... Alfred.
McKercher, Peter ..... L'Orignal.
Ross, Joseph ..... Vankleek Hill.
St. Pierre, Pierre ..... St. Eugene.
Scott, David ..... Riceville.

Peel.

Rayburn, John ..... Caledon.
Walterhouse, Edward ..... Cooksville.

Perth.

Clunie, W. R ..... Listowel.
Willton, R ..... Stratford.

Renfrew.

Brady, John ..... Renfrew.
Biggs, William E ..... Pembroke.
Biggs, Aaron ..... "
Coffey, Wm ..... "

Halliday, James	Springtown.
Johnson, S. M	Arnprior.
Kennedy, John	Pembroke.
McCagherty, P	"
McDonald, Alex	"
Plaunt, Xavier	Renfrew.
Smith, Robert R	Eganville.

Simcoe.

Baker, Daniel	Uthoff.
Bathie, Edward	Cookstown.
Beardsley, Alfred W	Barrie.
Coombs, John	Lovering.
Chapman, James	Cookstown
Fildey, George	"
Hines, John	Barrie.
Kearns, George	Ivy.
Kitchen, Joseph	Lovering.
Moir, John	Cookstown.
Mills, William	Elmvale.
McLaughlin, James	Anten Mills.
Primrose, Alex	Apto.
Pollock, Thomas	Cookstown.
Ross, Joseph	"
Regan, John	Orillia.
Rawson, Wm	Coldwater.
Shakell, William	Lovering.
Somerville, David	Stayner.
Upton, George	Nicholston.
Wilson, J. J	Fesserton.
Strathern, G	Midland.

Victoria.

Bowins, Charles	Coboconk.
Crowe, Nathaniel	Bobcaygeon.
Dewdney, Arthur W	"
Daniel, John	Balsam.
Ellis, J. A	Fenelon Falls.
Galloway, David	Moore's Falls.
Howie, John	Bury's Green.
Harris, Noxon	Bobcaygeon.
Henderson, Egerton	Lindsay.
Junkin, James	Fenelon Falls.
Lysh, William	Bobcaygeon.
McArthur, Donald	Manilla.
Nicholls, Gardner	Bobcaygeon.
Silverthorn, George	Balsam.
Ray, John	Kirkfield.
McArthur, A. M	Balsam Grove.

Welland.

Augustine, Elias.....Stonebridge.
Barkhart, Geo.....Sherkston.
Beam, Horace H.....Black Creek.
Griffin, Richard.....Fort Erie.
Hershy, Milford.....Garrison Road.
Miller, Charles A.....Black Creek.
Michener, Cyrenus.....Ridgeway.
Neff, Peter.....Marshville.
Nixon, J. C.....Welland.
Page, A. E. O.....Ridgeway.
Rose, Charles jr.....Garrison Road.
Risley, E. E.....International Bridge.
Teal, Irwin.....Ridgeway.
Teal, C.....“
Saner, Elias.....Welland.

Waterloo.

Bulmer, George.....Elmira.
Devitt, John.....Waterloo.
Fraser, Alex.....New Hamburg.
Gildner, Henry.....Berlin.
Gillier, Peter.....Galt.
Gress, Philip.....Blair.
Hall, James.....Hawksville.
Mengers, William.....St. Jacob's.
Mayers, Frederick.....Bridgeport.
Mickers, Joseph.....Heidleberg.
McMaster Thomas.....Hespler.
Stark, John.....“
Springess, Joseph.....Kossuth.
Gammon, W. E.....Ayr.
Riddell, W.....“
McCruden, Robt.....Galt.

Wentworth.

Gallin, Warren.....Waterdown.
Raspberry, Wm.....West Flamboro'.
Graham, H.....Hamilton.

Wellington.

Atkinson, George Osborn.....Guelph.
Gay, William.....Elora.
Gilchrist, John W.....Kilean.
Hull, Wellington.....Erin.
Love, James.....Guelph.
Lang, George.....Hillsburg.
McGinnis, Alex.....Arkell.
Robertson, Thomas.....Kilean.

Stewart, Donald	Creiff.
Smith, George	Eden Mills.
Stovel, Thomas	Mount Forest.
Williams, Henry M	Guelph.
Landoni, L	Dracon.

York.

Brown, Hume	Toronto.
Hope, W. B	"
Tidsberry, James L	Coleman.
Kennedy, James	Toronto.

Province of Quebec.

*Cowley, E. B	Montreal.
*Finnie, Dr. J. T,	"

*These officers have been especially appointed to enforce the Game Laws on Lake St. Francis, which is partly in Ontario and partly in Quebec.

REPORT OF CASES.

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address	Offence charged.
Wentworth	Chief Warden E. Tinsley	August 30	John Lyle	Hamilton	Shooting ducks in close season
		" 30	Robert Rich	"	"
		Nov. 26	F. Cook	"	Deer exposed for sale in close season
Muskoka	Warden J. H. Willmott	Jan. 26	G. Boyd	Mount Burton	Hunting out of season
		" 26	J. Boyd	"	"
		" 26	H. Cameron	"	"
		" 26	F. Adams	"	"
		Jan. 28	T. Milne	Sterling Fall	Allowing mill rubbish to escape
		" 28	W. McKichran	Magnetawan	Allowing sawdust to escape
		" 28	W. McLaughlin	"	"
		" 28	S. Walton	"	Netting
		April 13	G. Baker	Parry Sound	Possession of moose head
		June 10	T. Code	Huntsville	Possession of moose meat
		" 13	Wm. Dornam	Yearley P. O.	Hunting out of season
		Nov. 11	Henry Erickson	Berlin	Sunday hunting
		" 11	Henry Erickson	"	"
		" 11	Jacob Snider	"	"
			Jacob Snider	"	"
Essex	Warden F. C. Quallins		McHughs	Detroit	Shooting without license
			James McCarthy	"	"
			Mr. Phillips	"	"
Hastings	Warden H. K. Smith	Jan. 11	A. Sprague	Big Island	Spearing muskrats in close season
		" 11	G. Sprague	"	"
			S. Smith	"	"
			B. Fox	"	"
			E. Fox	"	"
			George Boulker	"	"
			F. Boulker	"	"
		March	J. B. Clark	Maynooth	Moose meat in possession
		"	—. Fouvell	"	Killing moose
		March 19	Albert Marshall	Coe Hill	Hunting deer close season
		" 19	Wm. Marshall	"	"
		" 19	James Wilson	"	"
		" 19	Patrick Finnigan	"	"
		" 19	Willlet Gurner	"	"
		April 4	George Woodcock	Arden	"
		" 4	David Scott	"	"
		" 4	Daniel Scott	"	"
		" 8	Billa McCumber	Halloway	"
		May 8	J. Funnell	Trenton	Beaver and otter skins in possession.
		" 23	Thomas Reynolds	Basin Depot	Killing otter
		July 7	A. Comego	Rosneath	Shooting ducks
		Sept. 24	—. Kraasler	Rochester	Shooting without license
		" 24	—. Peeters	"	"

Cases, 1895

Was offender, arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
Summoned..	Hamilton	Judge Jelfs..... ..	Fined $5 and costs.	
"	"	"	" $5 and costs.	
"	"	"	Case dismissed ...	
"	Dunchurch	Willmott	Fined $20	
"	"	"	" $20	
"	"	"	" $20	
"	"	"	" $20	
"	Magnetawan....	"	Thirty days	
"	"	"	Dismissed	
"	"	"	"	
"	"	"	"	
"	Parry Sound....	"	Fined $20	
"	Huntsville	Scarlet and Willmott.....	Dismissed	
"	Yearley	Wilson and Willmott.....	"	
Arrested ...	Oakley	Willmott	Fined $5	
" ...	"	"	" $5	
" ...	"	"	" $5	Rifle confiscated and sold for $3.
" ...	"	"	" $5	
.....	....	Crown Attorney Clark	Not settled	
.....	....	"	"	
.....	.....	"	"	
Summoned..	Big Island	H. K. Smith.....	Fined $5	
"	"	"	" $5	
"	"	"	" $5	
"	"	"	" $5	
"	"	"	" $5	
"	"	"	" $5	
"	"	"	" $5	
"	"	"	" $5	
"	Bancroft	James Clark.....	" $20 / " $20 } costs .	
"	"	"		
"	Coe Hill.....	Henry Johnston.....	Dismissed	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	Arden	H. K. Smith.....	Fined $20	
"	"	"	" $20	
"	"	"	" $20	
"	Madoc	"	Dismissed	
"	Trenton	"	Fined $50	
"	"	"	" $25	
"	Hastings	"	Dismissed	
"	Clear Lake.....	"	Fined $25	
"	"	"	" $25	

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address.	Offence charged.
Hastings ..	Warden H. K. Smith	Nov. 21	T. Knight	Gooderbrane	Shooting deer close season.....
		" 21	Joshua Pickens.....	Irondale	" .....
		" 21	John Wynn	"	" ....
		" 21	Isaac Wynn	"	" ....
		" 21	Robert Maxwell	"	" ....
		" 21	James Hadley..... ..	"	" .....
		" 27	Wm. McIvor	Millbrook	" ....
			Fred McIvor	"	" .....
		Dec. 4	E. Jackson	Coboconk	Venison in possession in close season
		" 4	A. B. H. Carl	"	"
		" 4	Robert Callon	"	"
		" 14	H. N. Jarman	Trenton	Selling partridges in close season .....
		" 17	A. Tyler	.....	Killing deer .....
			Joseph Douglas	....	" .....
			Charles Mackie	.....	" .....
			James Watson.....	.....	" .....
			Alex. Johnson.....	....	" .....
		Dec. 20	D. W. Budd.....	Renfrew	Possession of otter..
		" 21	George P. Cockburn ..	Sturgeon Falls....	Illegal furs..... ...
Algoma ...	Duncan Bole	July 18	George Orpen	Woman River	Fishing in trout streams with net.. ..
	"	" 18	Wm. Devine	"	"
	"	Dec. 12	W. Passlon	Mississaqua	Fishing through ice
	Andrew Black....	.....	H. Steamburge	Richard's Landing	Killing pheasant...
			C. Diboll	"	Selling deer skin out of season.....
Bruce	J. H. Armstrong .	April 4	James Bloore	Bervie	Hunting deer while crusting.....
		" 4	Charles Hodgins	"	" .....
		" 6	Sam. Armstrong.. ...	"	Hunting dear in close season while crusting.....
		" 7	James Portice	"	Killing deer in close season .....
		" 7	Sam. Colwell	"	Hunting deer in close season ..
		July 6	James Burns	Lucknow	Shooting partridge in close season....
		" 6	Robert McKarl	"	Putting sawdust in river ....
		Aug. 3	Mr. Hensberger	Mildmay	Catching bass length ....
		" 10	Mr. Creamer.	"	" .....
		" 8	Mr. Ernwein	Cleveland, Ohio ..	Fishing without license .....
	John Farquharson	June 26	Duncan Grant.....	Teeswater	Fishing by torchlight
		" 27	Thomas Caslick	"	"
		" 27	James Day	.....	"
		" 27	John Donaldson	"	"
		" 27	Robert Grant	"	"
		" 27	David Grant	"	"
		" 27	Graham Scott	"	"
		" 27	John Sharp	"	"
		" 27	Hugh Chisholm	"	"
		" 27	Thos. W. Small	"	"

CASES, 1895.

Was offender, arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
Summoned..	Irondale	Wm Fielding....	Fined $20	
"	"	"	" $20	
"	"	"	" $20	
"	"	"	" $20	
"	"	"	Dismissed	
"	"	"	"	
"	Millbrook	H. K. Smith.....	Fined $20	
"	"	"	Dismissed	
"	Coboconk	"	Fined $20	
"	"	"	" $20	
"	"	"	Dismissed	
"	Belleville	"	Fined $20	
"	"	"	" $20	
"	"	"	" $20	
"	"	"	" $20	
"	"	"	" $20	
"	"	"	" $20	
"	Renfrew	"	" $20	
.....	.....	.....	.....	Seized and not yet disposed of.
.....	.....	.....	Destroyed nets ...	No convicting magistrate within 75 miles.
.....	.....	.....	"	
.....	.....	.....	Burned fishing outfit	Hard to secure convictions on account of long distances between where offences were committed and any resident justice of the peace.
Summoned..	Richard's Landing	J. Richards	Fined $5 and costs..	
"	"	"	$10 and costs	
"	Riversdale	S. Simons	Fined $20 and costs, appealed and lost ..	
"	"	"	....	
"	"	"	" ..	
"	"	"	Fined $20 and costs.	
"	"	"	"	
"	Kinlough.....	"	"	
"	Kinloss	"	Fined $5 and costs..	
"	"	"	Fined $10 and costs, appealed and lost.	
"	"	"	Fined $10 and costs.	
Arrested ...	Riversdale	J. Cassidy	Dismissed	
Summoned..	Teeswater.....	J. K. McKean ...	Fined $2 and costs..	
"	"	"	Fined $2	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	
"	"	"	"	

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address.	Offence charged.
Bruce	John H. Garnier	April 23	James Burns	Lucknow	Killing two ruffed grouse
		June	Robert McCarroll	"	Putting sawdust in stream
		Aug. 1	Thomas Roesley	A Tramp	Killing a partridge
Bruce	A. Symon	May 15	Wm. Willie	Unknown	Fishing speckled trout in close season
		June 27	Daniel Grant	"	Fishing by torch-light
		July 12	Duncan Grant	"	"
		" 12	Thomas Caslick	"	"
		" 28	Robert Grant	"	"
		" 28	Robert Grant	"	"
		" 16	Alf. Caslick	"	"
Dundas	James Price	June 29	Joseph A. Seymour	Inkermann	Shooting muskrat in April
		July 3	Wm. B. Marquette	"	"
		" 3	Thomas Barkley	"	"
Frontenac	J. H. Brickwood	May 4	S. Rider	Washburn	Breaking rat houses.
		" 4	S. Rider	"	Catching rats on Sunday
		Sept. 7	H. Richardson	Kingston	Found on hunting ground with gun
		" 7	H. Wartmann	"	"
		Dec. 14	John Lee	Township of Oso	Selling muskrat skins
Frontenac	Levi Tyron	Aug. 17	R. Jackson	Verona	Duck-shooting
		Oct. 10	E. Ashley	"	In pursuit of deer
Essex	Allios Master	" 18	George Mair	Windsor	Shooting ducks out of season
Essex	Anthony Banks	October	Edward Duncan	Vereker	Sunday shooting
		"	James Deslippe	Amherstburg	"
		"	Chas. Foudry	Vereker	"
		"	Alonzo Durham	Amherstburg	"
		"	Denis Robidoux	"	"
Grey	Malcolm Campbell	March 27	Joe Breenan	Chesley	Shooting and killing insectivorous birds.
Grey	Ludwig Siegmann	June 20	Phil Hoffman	Neustadt	Sunday fishing
		" 20	F. Westenhoffer	"	"
		Nov. 15	Abselon Unger	Moltke	Sunday hunting
Haliburton	James Turnbull	Nov. 16	James Workman	Minden	Killing partridge out of season
		" 16	Andrew Morris	"	"
Huron	John Gill	Jan. 7	Chas. Swallow	Woodham	Killing deer.
		" 12	Jos. Lawson	Crediton	In pursuit of game
		July 24	Wm. Ward	Fullerton	Killing quail

Cases, 1895.

Was offender, arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
Summoned..	Kinlough.....	Mr. Simons	Convicted, fined $5 and costs	I have prevented various parties and warned them of the consequences of settling stakes for traps and nets and using these unlawful means.
"	"	"	Fined $10 and costs.	
He ran away and was not chased	....	.....	....	
Summoned..	Riversdale	A. Symon	Fined $10, $5 to go to complainant and $5 to Prov. Treas	
"	"	"	Fined $5	
"	"	"	Fined $10	
"	"	A. Symon and W. R. Thompson	"	
"	"			
"	"	A. Symon.....	"	
"	"	"	Fined $5	
Pleaded guilty without summons	Inkerman	John Sullivan	Fined $5 and costs..	Seized three traps and destroyed them.
"	"	"	" ..	
"	"	"	" ..	
Summoned..	Portsmouth	D. T. Walker	" ..	I destroyed three spile nets and two hoop nets in Rideau Canal, fishing illegally, but did not catch the owners.
"	" ..	"	" ..	
"	"	"	" ..	
"	"	"	" ..	
"	"	"	Fined $2 and costs..	
"	Verona.....	A. Grant	Dismissed	Nov. 12, seized 14 rat traps and sank them.
"	"	"	Fined $5 and costs..	
"	Windsor	A. Bartlett	" ..	
"	Harrow	John Richmond ..	Fined $5	
"	"	" ..	"	
"	"	" ..	"	
"	"	" ..	"	
"	"	" ..	"	
"	Hanover	John Proctor	Fined $2 and costs.	
"	Neustadt.....	Charles Heise	" $5 " ..	
"	"	"	" $5 " ..	
"	"	"	" $5 " ..	
"	Minden	Wm. Fielding....	" $5 " ..	
"	"	"	" $5 " ..	
"	Exeter	Charles Snell	" $25 and costs $5	
"	"	Wm. Lawson.....	Case not proven	
"	"	J. L. Russell	Fined $5	

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address.	Offence charged.
Leeds	George Bilton	July 20	H. A. Laing.....	Newboro'	Putting deleterious substance in water
		Nov. 14	Wm. Graham	"	Trapping muskrats illegally .....
		" 16	A. W. Merriman	Elgin	Shooting deer out of season ....
		" 23	Wm. Stedman	Plumbhollow	Muskrat skin in possession out of season
		" 23	Robert Kimberly	Portland	Selling muskrat out of season ....
		" 23	Lewis W. Brown	Elgin	Shooting deer out of season..... .....
		Dec. 5	John Graham	Newboro'	Trapping muskrats illegally .....
Lennox ...	H. W Huff.....	Jan. 3	Geo. Snider.....	Napanee	Infringing game laws .....
		" 3	Stanley Clapp.....	"	" ....
		Dec. 19,'94	Seth Bruser	"	" .....
		Feb. 2	Henry Lindsay	"	" .....
		May 4	A. C. Parks	"	" ... ...
		" 7	Archie Avery	"	" .....
		June 8	Albert Post	"	" ....
Lambton..	Albert E. Jarvis.	Oct. 29-30	Geo. Bounah	Port Huron	Duck-shooting without license and from a sailboat ...
Muskoka..	Michael Woods...	Dec. 27,'94	Doolittle & Co	Freeman Township	Having deer out of season.....
		" 28	"	"	Deer out of season..
		" 29	John Kelly	Medorn	Killing caribou.....
Muskoka..	W. B. Crompton.	Jan. 29	Wm. Ratlem	Humphrey	Deer out of season..
		Nov. 16, tried Dec. 12.....	C. T. Simcox	Aspdin	Killing deer out of season .....
Muskoka..	Walter Foreman..	Jan. 18	P. M. Shannon	Port Carling.. ...	Netting .....
		"	"	"	Herring in possession
		Nov. 16	E. More	Uxbridge.....	Sunday hunting....
		" 16	A. Goshe	Foot's Bay	" ....
		" 16	R. Greig	Camp 4	" ....
Muskoka..	John Lawrence...	June 13	W. Quinn	Yearley	Killing a moose.....
		" 19	"	"	" ....
		" 13	W. Romain	Ashmorth	Hunting deer .... .
		" 19	Ernest Romain	"	Killing deer.....
Muskoka..	C. N. Chapman..	Oct. 12	....	.....	.....
Muskoka..	Elias N. Traves..	May 19	John O'Heir.....	Bracebridge	Sunday fishing.....
		" 19	John Leeds	"	" .....
		June 6	....	....	....
		May 3	Henry Palmer.....	.....	Sunday hunting ....
		Nov. 3	Frank Haight.....	Barrie..... ...	" ....
		" 3	Richard Appleby	Bracebridge	" ....
		" 21	.....	....	....

CASES, 1895

Was offender, arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
"	Newboro'	J. A. Shaver	$4 and costs paid to Dominion Gov.	
"	"	"	$5 and costs	Six skins sent to H. K. Smith, Belleville.
Complaint laid	"	"	$20 "	
Summoned	"	"	$5 "	
Complaint laid	"	"	$5 "	
"	"	"	$20 "	
"	"	"	$5 "	
Summoned	Napanee	James Daly	$5 "	
"	"	"	$5 "	
"	"	"	$5 "	
"	"	"	$5 "	
"	"	"	$5 "	
"	"	"	$5 "	
"	"	"	$5 "	
Arrested	Sarnia	W. J. Proctor	$5 " $4.40	
Search warrant		P. M. Shannon	No case	
Summoned	Port Carling	"	Convicted	
Search warrant		"	No case	
Summoned	"	"	Convicted	
"	Aspdin	A. Sproal	Case proved but judgment deferred	
"	Bracebridge	Judge McHaffie	$10 and costs	
"	"	"	Dismissed	
"	Port Sandfield	G. F. Buttler	$10 and costs	
"	"	"	$5 "	
"	Port Carling	P. M. Shannon / L. S. Wallace	Lost	
"	Ashmorth	James Wilson	Not settled	
"	Shannon Hall	"	Dismissed	
"	Ashmorth	James Wilson / J. H. Willmot	"	
"	Shannon Hall	James Wilson	"	
				Number of night lines and nets seized and destroyed.
Arrested	Bracebridge	James Boyer	$2 and costs	
"	"	"	"	
				Shot a hound running deer.
"	"	"	Fined $5 and costs	Seized one rifle, confiscated, $2.50
"	"	"	"	Seized one gun, confiscated, $2.50
"	"	"	"	Seized one rifle, confiscated, $2.50
				Seized two beaver traps, have them still in possession.

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address.	Offence charged.
Muskoka..	C. F. Butler.....	Nov. 13	Edward Moore	Uxbridge	Hunting on Sunday
		" 13	Alfred Gostrick	Foot's Bay	"
		" 13	Norman Thompson ..	Orillia	"
		" 13	Robt. Craig	Gravenhurst.....	"
Middlesex.	R. W. Ward	April 21	Alf. Gregory	London West	Spearing fish at mill dam . .. .
		" 21	Edward Borland.....	"	" ..... .
		" 21	Wm. Borland	"	" .....
Northumberland..	Thomas Diamond.	May 2	Jas. Elliott	Rosemeath	Having fish in possession during close season .....
Nipissing..	Mortimer Meeks..	October 6	Jno. Matthews	Whitney	Sunday hunting ....
		" 6	Jas. Martin	No address	" ....
		" 6	Peter White.....	"	" ....
		" 19	John Fitzgerald	Whitney	Obstructing me in discharge of duty
		" 23	John Dilinage.....	Almonte	Killing deer out of season.....
		" 23	John Bowell.....	"	" .....
		" 23	D. Davies.....	Ottawa	" ....
		" 24	Jas. Clark.....	"	Sunday hunting ....
		" 30	John Fitzgerald	Whitney	Having fur illegally in possession. ....
		Dec. 19	Geo. Palley	"	Sunday shooting....
		" 19	Jos. Lagree	"	" .. .
		Nov. 20	.....	.. ..	....
Ontario ..	Matthew Frankish	Jan. 5	Jabez Wright	Uxbridge	Illegal fishing .....
		" 5	John Cowan.....	"	" .....
Ontario ..	Jas. Hadley.....	May 30	Unknown	Toronto	Shooting .....
		June 29	A. Booth	Dunbarton	Having ducks in possession out of season ... .
		" 29	Wm. Cowan.....	Rose Bank	Having gun in his possession where there was game ..
		July 6	Wm. Chester	Pickering	"
			Fred. Stoner	Liverpool market..	Shooting one duck ..
			Geo. Stoner	"	Shooting at ducks ..
			Ed. Stoner	"	Shooting at plovers .
			John Marks	Toronto	"
			James Gordon.....	Pickering	Having guns in their possession and pursuing duck .....
			John Avis.....	Toronto	" .....
Oxford	Richard Martin ..	April 23	John Neill.....	Woodstock	Illegal fishing .....
		" 23	John Neill.....	"	Having fish in his possession ....
		" 23	Edgar Nickerson	"	Fishing trout out of season.....
		" 23	Edgar Nickerson	"	For having eleven trout in his posaession.....
Prescott ..	David Scott.....	" 5	Dan. Harkin	Fournier	Dogs pursuing deer during close season
Peterboro'.	Wm. Wedlock....	" 12	Amos Thram	Rosneath	Shooting ducks ....
		" 12	Percy Trower	Cobourg.....	" ....
		" 13	Robt. Franklin	Rosneath	" ....
		" 13	Ebenezer Comego	"	" ....
		" 13	Thomas Douglas.....	"	" ....

CASES, 1895.

Was offender, arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
Summoned	Pt. Sandfield ..	C. F. Butler.....	Fined $10 and costs.	
"	" ..	"	Fined $5 and costs..	
"	" ..	"	....	Did not attend to summons, so warrant of arrest was issued but has not been returned as yet
"	" ..	"	.....	
"	London West ..	R. T. Lacey.....	Sentence suspended as the offenders were under the age of 14 years ..	The spears were seized by me and ordered by the court to be destroyed.
"	" ..	"		
"	" ..	"		
"	Cobourg.....	J. H. Dumble	Fined $5 and costs..	
Arrested ..	Whitney	W. Christy	Fined $5	Seized one gun delivered to W. Christy.
" ..	"	"	"	
" ..	"	"	"	"
" ..	"	"	"	
Summoned	Eagon estate....	Wm. McKay	Fined $10	Seized four partridges, gave them to a destitute family. Seized one Winchester rifle, one quarter of venison and one deer skin. Delivered them to Wm. McKay, J.P.
"	"	"	.....	
"	"	"	....	
"	"	"	Non suited	
"	"	"	Charge proven but not fined	
"	" ..	"	Fined $5	Seized a small pack of muskrat skins, re-taken possession of by Fitzgerald.
"	"	"	Failed to convict, lack of evidence ..	Destroyed a number of wire snares set for deer.
.....	.....	....	.....	
Summoned	Uxbridge	Ed. Campher	Suspended sentence.	
"	"	"	"	
Arrested ..	Dunbarton	G. Parker	$5 fine	
Summoned	"	"	Dismissed with costs	
"	"	"	"	
"	"	"	Case withdrawn	
"	"	"	$5 and costs	
"	"	"	Case withdrawn	
"	"	"	"	
"	"	"	"	
"	Did not appear..	"	"	
"	"	"	"	
"	Woodstock	G. C. Field	Dismissed	Seized one net, have same in my possession.
"	"	"	"	
"	"	"	Fined $10	
"	"	"	Fined $11	
"	Riceville	J. Moffatt.....	Fined $20	
Settled	Cobourg.....	H. K. Smith.....	Fined $15	Confiscated nineteen ducks, sent them to the hospital.
"	"	"	"	
Summoned	Hastings	"	Fined $5 and costs..	
"	"	"	Discharged	
"	"	"	"	

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address.	Offence charged.
Parry Sound...	A. Sloman	August	Not known	Toronto	Having deer skins ..
" ...	J. A. Johnson....	... .	"	.....	Illegal fishing .....
		August	"	.....	" .....
" ...	C. W. Burns	June 24	John Goode	South River.	Sunday fishing .....
" ...	F. W. Draycott ..	Jan. 18	Henry Bishton	Ashdown	Deer hunting out of season.....
			Wm. Evans	"	" .....
			John Tracey	"	" .....
...	A. J. Greer	April 13	Fred Baker	Parry Sound	Moose head in possession .....
		August 5	J. C Hardy.....	"	Sunday fishing .....
		" 5	Wm. Brooks	"	" .....
		Dec. 30	John Fletcher	McKellar	Hunting out o season .....
		" 30, '94	John Tait.....	"	Running dogs out of season .....
		October 25	Frank Lefer.....	Parry Sound	Killing deer out of season ....
...	R. R Smith.....	Dec. 21	Thomas Granberger ..	Restoul	Killing moose .....
			Michael Mullen	Nipissing.....	Having deer in possession .....
...	N. Mainprize.....	March 20	Rob. Robertson	Loring	Moose head in possession .....
...	Robert Mitchell ..	Jan. 28	John Milne	Stirling Falls	Putting sawdust in stream ....
		" 28	Neil McEacheran.....	Magnetawan	" .....
		" 28	Wm. McLaughlin	"	" .....
		" 28	S. Walton	"	Net fishing .....
		" 28	Wm. McClelland	Dundurch	Shooting moose .. .
		Dec. 18	Frank Labrash	"	Killing deer and running dogs out of season and selling venison.
			Charles Labrash.....	"	
			Edwin Taylor	"	
		" 18	Joseph Simpson	Ahmic Harbor....	Sunday shooting, November 3.....
" ...	J. P. Labrash	February	W. Leitch	Whitestone	Running dogs .....
		"	M. Hanlon	"	" .....
		"	L. Dowrin	Maple Island	Killing deer... .. .
		Nov. 14	S. Calvert.....	Dunchurch	" .....
		Dec. 17	E Taylor	"	Using deer in camp.
		" 17	C. Labrash	Maple Island.....	Running dogs and hunting deer .....
		" 17	F. Labrash	"	Selling venison ....
Simcoe....	David Somerville.	Sept. 1	Joseph Aston	Collingwood	Shooting ducks on Sunday .....
Simcoe....	Daniel Baker	Jan. 5	Sam. Jennings.....	Foxmead	Killing deer out of season.....
		" 5	James Brown	"	Running dogs out of season .....
			Aaron Stewart	"	" .....
		" 5	Donald Cameron	Rugby.	" .....
		Feb. 1	Herbert Vick	Orillia	Sunday hunting ....
			August Moore.....	Foxmead	Killing deer out of season .....

CASES, 1895.

Was offender, arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
.....	.....	....	.....	Seized a bundle of hides at station comprising of: 13 deer skins, 10 sheep and 1 calf skin. Sold the lot for $6.50, of which I sent Mr. Willmott, the rest being my expenses.
.....	.....	.....	.....	Seized one trap net.
....	.....	.....	.....	Seized one gill net.
Summoned .	South River....	Richard Cole	Fined $5 and costs..	
"	Rosseau	James Wilson	Fined $20 and costs.	
"	"	"	"	
"	"	"	"	
"	Parry Sound....	J. H. Willmott ..	Fined $20	Seized two nets, sold one for $3, sent half proceeds to J. H. Willmott and half for expenses. Handed the other net to J. A. Johnston, fish overseer. Owner not known.
"	"	J. H. Farrier	" $5, not paid..	
"	"	"	" $5, " ..	
"	McKellar	J. H. Willmott ..	Dismissed	
"	"	" ..	"	
"	Parry Sound ...	J. Farrier	Fined $20	
"	Restoul	A. N. McCambel.	Not proven	
"	Golden Valley..	Alex. Smith.....	"	
Arrested ...	Loring	C. K. Arthur.....	Imprisonment for 2 months	
Summoned .	Magnetawan ...	Edgecombe, Willmott.	30 days in jail.....	
"	" ...	"	Found not guilty...	
"	" ...	"	" ..	I seized and destroyed two nets, one on Cebele Lake, July 9, and one on Horn Lake, September 12.
"	" ...	"	" ..	
"	" ...	J. H. Willmott ..	Pleaded guilty, fined $50	
"	Did not appear.	Wm. Robertson ..	....	
"	"	" ..	.....	
"	"	" ..	.....	
"	Dundurch	" ..	Not guilty, each to pay their own costs	
"	Ahmic Harbour.	Joseph Hunter ..	Dismissed	
"	"	" ..	"	
"	"	" .	Fined $40	
"	Dundurch	Wm. Robertson ..	" $60	
"	Ahmic Harbour.	Joseph Hunter ..		
"	"	" ..	$20 and cost each .	
"	"	" ..		
"	Settled without trial.....	H. Allan	Fined $20 and costs.	In march, 1895, seized about 200 feet of nets set under the ice in Jack's Lake. Sold them by auction for $1.
"	Orillia.....	G. J. Booth R.J.Sanderson J. H. Millmott	Fined $5 and costs—$15.85 in all.....	
"	"	"	Fined $20 and costs each, amounting to $25.85 each...	
"	"	"		
"	"	"		
"	"	"	Fined $5 and costs..	
"	"	"	$20 and costs	

REPORT OF

District or county.	Name of prosecutor.	Date, 1895.	Name of offender.	Address.	Offence charged.
Victoria. .	Egerton Henderson	April 4	....	.....	.....
		" 20	....	.....	.....
		July 9	....	.....	... .
Victoria ..	David Galloway ..	Nov. 20	Robt. Oswald	Kinmount.....	Killing deer in close season.... .....
		"	Dennis Ellis.....	Norland.....	Killing deer in close season.....
		"	R. J. Bolt.....	Kinmount.....	Killing beaver.....
		" 5	F. Cooper.....	Norland.....	Killing deer in close season.....
		"	C. Woodcock	"	Having deer in possession in close season.....
		"	F. Gortlin.	Head Lake	Having deer in possession in close season.....
		"	D. McRae.....	Coboconk	Having deer in possession in close season..... .....
Waterloo..	John Devitt.....	May 9	Jacob Groff	Waterloo	Using illegal appliances for catching speckled trout....
		" 24	"	"	Catching speckled trout under length
		Sept. 22	"	"	Using illegal contrivance for catching trout .....
		Oct. 13, 14	"	"	Catching trout out of season.....
		" 27	Philip Hick	Bridgeport	Sunday shooting. ..
		"	Philip Koerber	"	" ....
		"	George Koerber	"	" ....
		Nov. 3	"	"	" ....
			Philip Heck.....	"	" ....
		"	Philip Koerber	"	" ....
York.....	Jas. Kennedy	Nov. 23	Harry Haines	422 Spadina Ave..	Exposing venison for sale .....
		"	Alfred Piddington. ..	400 " ..	Exposing venison for sale... ....
		"	J. B. Davidson	287 College street.	Exposing venison for sale .. ..
		" 27	Wm. Schubert.....	154 Brunswick Av.	Exposing venison for sale ....
		Dec. 24	J. Briton & Son.....	381 Yonge street..	Exposing hares for sale ....
		"	Alfred Deacon.....	696 " ..	Exposing hares for sale .....
		"	S. Jones.....	30 Queen street w.	Exposing hares for sale .....
		"	J. C eghorn & Son....	94 Yonge street ..	Exposing grouse for sale..... .....

Cases, 1895.

Was offender arrested or summoned.	Where tried.	Name of magistrate.	Result of case.	Nets, traps or appliances seized during the season of 1895.
.....	....	.....	.....	Seized six traps set in rat house and still hold them, also ten traps belonging to Indians, and returned them on condition they would not break any more houses.
.....	....	.....	....	Seized two spears, owners making escape
....	.....	.....	.....	Seized one gill net, have spears and net in my possession still.
Summoned .	Minden	Wm. Fielding....	Fined $20	
"	"	"	"	
"	"	"	Dismissed	
"	Coboconk	H. E. Smith	Fined $20	
"	"	"	Fined $20	
"	"	"	Fined $20	
"	"	"	Fined $20	
Summoned..	Berlin.....	John A. Mackie..	Fined $2 and costs..	
"	"	"	Dismissed	
"	"	" ...	Fined $10 and costs. Appealed	
"	"	"	Fined $20 and costs. Appealed	Seized illegal contrivance, have it in my possession.
"	"	"	Fined $5 and costs..	
"	"	"	" ..	
"	"	"	" ..	
"	"	"	" ..	
"	"	"	" ..	
"	"	"	" ..	
No action taken yet.	....	.....	Result of these cases will appear in Report for 1896.	In addition to the above a large number of nets and illegal contrivances have been destroyed by deputy wardens, in localities where no other disposition could be made of them.

FIFTH REPORT OF

THE BUREAU OF MINES

1895.

PRINTED BY ORDER OF

THE LEGISLATIVE ASSEMBLY OF ONTARIO.

TORONTO:

WARWICK BRO'S & RUTTER, Printers, Etc., 68 and 70 Front Street West.

1896.

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To His Honor GEORGE AIREY KIRKPATRICK,

Lieutenant-Governor of Ontario:

I have the honor to transmit herewith, for presentation to the Legislative Assembly, the Fifth Report of the Bureau of Mines.

I have the honor to be, Sir,

Your obedient servant,

A. S. HARDY,

Commissioner of Crown Lands.

DEPARTMENT OF CROWN LANDS,

Toronto, March 31, 1896.

FIFTH REPORT OF

THE BUREAU OF MINES.

To the Honorable ARTHUR S. HARDY,
Commissioner of Crown Lands:

SIR,—The Fifth Report of the Bureau of Mines is submitted to you herewith, for presentation to His Honor the Lieutenant-Governor.

Scope of the Report.

Besides the statistics of mineral lands sold and leased by the Crown, and the quantities and values of metallic and non-metallic mineral productions of the Province during the year, this Report deals with a variety of subjects related to the development and progress of our mining industry.

Gold areas north and west of lake Superior.

The increasing interest evinced by explorers, miners and moneyed men in the gold districts of the Province, and the promising discoveries reported from time to time in new fields, appeared to call for a further and an extended examination of the formations which were believed to be gold-bearing. Accordingly Dr. Coleman was instructed to continue the work which he had commenced in 1894, and to report upon all areas north and west of lake Superior in which gold had been found. Besides the districts upon the Seine river from Steep Rock lake to Rainy lake, along the Manitou and Wabigoon rivers from Rainy lake to Wabigoon lake, and parts of Lake of the Woods, he visited and examined the tract of country from Wabigoon lake to Lonely lake on the northern boundary of the Province; the region south and southwest of Lac des Mille Lacs, bordering upon Shebandowan and Round lakes, including Moss township; a section in the valley of Mattawin river, along Gold creek; and a locality near Jackfish bay, on the north shore of lake Superior. The Doctor visited also a number of important iron ore locations along Mattawin river, and Silver Islet in lake Superior, some accounts of which are given in the report of his explorations.

Iron ores in the Mattawin valley.

Map of the gold regions.

A geological map of the regions of Seine river and Rainy lake and of the Manitou and Wabigoon rivers, with all surveyed mining locations laid down upon it, accompanies the text of Dr. Coleman's report. It will no doubt prove valuable to prospectors and miners.

Gold mines and mills in Rainy lake and Lake of the Woods districts.

I accompanied Dr. Coleman in his excursion from Savanne to Moss township and from lake Shebandowan to the iron ore locations in the Mattawin valley, and afterwards proceeded by Lac des Mille Lacs and the Atik-okan river to inspect mines and mining prospects along the Seine river and on Lake of the Woods. Six stamp mills have been erected in those districts for treating gold ores, with an aggregate of sixty stamps, two of which are on the Seine river and four on Lake of the Woods. Five of these were in operation for a few weeks only, owing to insufficient development of the mines; but one of the five has been running steadily since September. The Sultana mine supplied a ten-stamp mill with ore constantly during the year, the main shaft of which has reached a depth of 200 feet and is in good ore throughout. The total gold production of the two districts last year was about $50,000; and as development work has been pursued at a number of points during the autumn and winter, it is confidently expected that the yield will be largely increased this year. Upon returning to Port Arthur I had an opportunity to visit Silver Islet, Edward's island and the east shore of Black bay. At Sudbury I visited the extensive works of the Canadian Copper Company, where mining and smelting operations were actively carried on; and subsequently the Mammoth mine, the gold property of the Bonanza Nickel Mining Company in the township of Maclennan, near lake Wahnapitæ, where the Government diamond drill was at work. A narrative of my tour forms a section of the Report; and many notes and observations of the country made and gathered by the way, bearing on its geology, physical geography, forests, soil, etc., have been utilized for a section on The New Ontario.

In the Sudbury district.

The New Ontario.

Employment of the Government diamond drill.

The diamond drill was employed last year upon two locations. For nearly six months it continued the work undertaken at the end of 1894 to explore the Glendower iron mine in Frontenac, and for nearly three months following it was run at the Mammoth mine. The data of these operations have been used by Mr. Gibson, secretary of the Bureau, along with similar data collected from other sources, to show the rate of speed at which the process of drilling can be carried on in rocks, minerals and ores of different kinds, together with the cost and efficiency of this method of exploration, and other features of practical interest.

The Hamilton blast furnace.

The completion of the blast furnace at Hamilton is an event of significant importance in the progress of mining and metallurgic enterprise in Ontario, and a description of the works is given in the first section. There is reason to believe that the demand for ore which this furnace must establish will lead to the opening up and working of a number of the many iron deposits which are known to exist in our Province.

Exploring north of the height of land.

As a result of explorations conducted during the past forty years, it is demonstrated that the largest and most valuable ore bodies in Ontario are to be looked for in rocks of the Huronian formations, and wherever these occur they deserve to be carefully examined. Extensive areas of them are known to exist beyond the height of land, and the time cannot be distant now when the attention of prospectors will be drawn towards them. In anticipation of such a movement it has been deemed advisable to procure information on the best means of access to these Huronian fields, which lie far beyond the range of existing settlements and even beyond the limits of lumbering operations. Mr. Edward B. Borron, an experienced and capable miner who has made a number of trips across the country to James bay in his capacity of stipendiary magistrate for the northern part of Nipissing district, was employed last year to report upon rock formations along the height of land, with special reference to Huronian tracts and the best way of reaching them by canoe routes from south to north. The section allotted to him extends from White river to the Spanish, but on account of illness he was able to examine only a portion of it towards the west, where the formation appears to be chiefly Laurentian. The most interesting as well as most promising part remains to be explored. and in particular the northern extension of the great Huronian belt beyond Sudbury and lake Wahnapitæ to the headwaters of the Mattagami, the Montreal and Abitibi rivers.

The petroleum industry.

The recent rise in the price of petroleum led during the past year to the drilling of many wells in the Petrolea and Oil Springs districts, and in other localities where there was reason to believe that oil might be found. Along the south branch of the Sydenham river, in Euphemia township, several wells were bored which yielded a small flow, and operations have also been commenced in the old Bothwell field in the townships of Zone, Orford and Aldborough. A new field began to be exploited on Pelee island in lake Erie a year ago, by a syndicate now organized as the Pelee Gas and Oil Company. The first well was bored in the northeast corner of the island to a depth of 938 feet, when salt water was struck. The site for a second well was selected on the Dyke road near the western side of the island, where in October a small flow of oil was reached at 833 feet. A third well was started in November a mile and a half south of the second, and on the 7th inst., at a depth of 750 feet, oil was struck which spurted out of the bore hole to the top of the derrick, a height of 35 feet, but the capacity of it is not yet known. A strong flow of gas accompanies the oil.

Mining accidents.

The section of the Report devoted to mining accidents shows that the number occuring has been fewer than in previous years, and that excepting in the case of a fire at the Sultana mine, in which one man lost his life, there

are no fatal casualties to record for mines or works over which the Bureau has heretofore had jurisdiction. One death resulted from a premature explosion in a prospecting shaft where only two persons were employed, but under section 53 of The Mines Act 1892 the mining regulations do not apply to any mine "unless more than six persons other than the owner are employed under ground." The amending Act which has received its third reading to-day makes the regulations apply to all mines and works.

Summer Mining Schools.

The appropriation made by the Legislature last year for Summer Mining Schools was placed at the disposal of the Kingston Mining School, and classes were held during the year under the direction of Wm. Hamilton Merritt, Assoc. R.S.M., at Mine Centre, Rat Portage, Port Arthur, Sault Ste. Marie and Sudbury. An account of the work done at those schools, as well as at the Kingston School of Mining, is added to this Report; as also a description of the mill set up in the School of Practical Science last year for treating gold ores.

The Inspector's report.

The report of the Inspector of Mines, made to me under date of March 14, accompanies this Report and forms part of it.

I have the honor to be, Sir,

Your obedient servant,

ARCHIBALD BLUE,

Director.

Bureau of Mines,

Toronto, March 30, 1896.

SECTION I.

GENERAL INTRODUCTION.

Indications of progress in the mining industry.

Although Ontario is a Province of large extent, and embraces within its boundaries geological formations from the lowest and oldest up to but unfortunately not including the coal measures, and although evidences abound of the richness and variety of its mineral wealth, it is not yet possible to speak of it as a country possessing a well established mining industry. In some directions we are making progress, and year by year confidence is growing that capital and labor will find a generous reward when employed in opening up the hidden treasures of our rocks; but in the minds of most people the rate of progress is painfully slow, and in some minds there are doubts if the treasures really exist anywhere. Meantime the hardy explorers are busily employed in search of minerals, and reports of new discoveries are heard from quarters of the Province heretofore not suspected of possessing ores or minerals of any kind, and locations are being taken up, and men with money at their credit in the banks are making investments, and occasionally mining camps are established, and in spite of the depression in trade and the stringency in the money market there is a feeling that somehow the outlook is brightening in Ontario and that the process of education which has been carried on with more or less assiduity during the past four or five years concerning its mineral resources is producing its natural effect, even upon a people so slow to take up new and possibly hazardous enterprises as the Canadian moneyed men, with their $187,000,000 deposited in the banks.

The Hamilton blast furnace and the effect it is likely to have upon iron mining.

The merchants and manufacturers of Hamilton, with the courage and dash for which they are becoming noted, have had the satisfaction at last of seeing their iron furnace blown in and producing from native ores a pig iron of first rate quality. It is well nigh forty years since the last iron furnace in Ontario went out of blast, and during that long interval the iron mines of the country have been almost wholly idle. Indeed so little interest was felt in iron ores during this period that men had ceased to look for new deposits, and if discoveries were made it was more as a result of accident than of prospecting with intent. The requirements of the Hamilton furnace will no doubt lead explorers to take to the woods again, and old mines will be reopened, and roads and railways will be built to reach known deposits, and capital and labor will find employment in many directions in response to the requirements of this one new enterprise of the sturdy business men of Hamilton.

The nickel and copper mines.

The nickel and copper mines too are showing that they have a solid bottom. They are producing steadily, the demand for their metals is well maintained, and although reverses may be met with by some who undertake to work those mines, there is no fear but they will continue to give employment to men and money, as well as character and stability to mining operations in the country. Mining begets mining, and the industry established at Sudbury cannot fail to react upon like

undertakings elsewhere. The reputation of nickel as a metal valuable in the arts is growing every year, new uses are found for it, and with the cheapening of production as a result of the discovery of new processes for treating and refining the ore, it cannot be but more labor, more capital and more skill will be required in its production. And of this fact we have a pretty good assurance, viz., that the largest and richest deposits of nickel in the world are found to lie within an area of 2,000 square miles in the Province of Ontario, and in a region of easy access by water and rail. There may be richer and larger deposits elsewhere, possibly, but if so they remain to be discovered. Then there are the gold fields. The precious metal is found in the eastern part of the Province, in the county of Hastings, where mines were worked a quarter of a century or more ago, and where they are likely to be worked again and to greater advantage, with a knowledge of better methods for treating the ores and winning the metal. It is found in the middle northern part of the Province, in the same great Huronian belt which produces the ores of nickel and copper, where discoveries have been made of very bright promise, as around the shores of lake Wahnapitæ. It is found on the north shore of lake Superior—where is a discovery not yet a year old, and the large veins of rich quartz there are likely to yield bullion in good quantity before the present year is out. It is found too throughout an extensive region from Lac des Mille Lacs to the western shore of Lake of the Woods and from Rainy lake on the Minnesota boundary to Lonely lake on the Keewatin boundary, a tract of at least 2,000 and more probably 3,000 square miles. Here, on Lake of the Woods and along the Manitou and Wabigoon rivers, on Rainy lake and along the Seine river, most promising discoveries have been made within the last four or five years, and perhaps the best of them within the last four or five months, and already several mines are steadily worked and are producing gold with an outlay of capital which in other countries would strike the miner with astonishment. Many of the properties are easily reached by waterways; indeed the prospector has hardly yet at all ventured inland from the canoe routes, and in consequence there is little need of roads over which to take machinery or supplies. And of course there is no scarcity of that very essential element in milling gold ores, water. In Western Australia at the present time the Legislative Assembly is being asked by the Government to grant $12,500,000 to provide a water supply of 5,000,000 gallons daily to the Coolgardie gold fields. The whole area of this gold field of ours in north-western Ontario is a network of rivers and streams, with navigable lakes whose long arms stretch inland such distances as to give to comparatively small sheets of water like Lake of the Woods and Rainy lake a coast line as long as that of lake Erie or lake Ontario. The timber too is abundant for every purpose of the miner, under ground and above ground, for supports, for buildings and for fuel; and there are many gold fields elsewhere to which gold hunters flock where no timber is to be had for any purpose. In Western Australia wood for fuel costs $10 per cord. Moreover, the ore of this wide region is almost altogether free milling; so much so that with a stamp mill 80 to 90 per cent. of the contained gold may be taken off the plates. It is usual to speak of placer deposits as the poor man's field for mining, as he may with

Gold fields of Ontario.

Comparative advantages offered to investors and miners by the Ontario gold regions.

a pan or a rocker wash the gold out of the gravel. But with free milling ore which yields $10 to $20 or $30 per ton, and a mill of five or ten stamps which can be set up and fully equipped at a cost of $5,000 to $10,000, there is ample encouragement for a venture by the mining man who knows his business and is possessed of even modest means. Between such an enterprise and one which requires an outlay of $500,000 for a smelting plant, there is a contrast which ought to tell most favorably for the gold field of northwestern Ontario, and there is good reason for the hope that it is now beginning to do so. Already there are large investments of British and American capital, as well as of some Canadian capital, in properties on Lake of the Woods and along the Seine river, and in a few months at the outside enough work will probably have been done to make or mar the fortune of the district as a gold field. With four such valuable metals as iron, copper, nickel and gold being produced in the country, and with confidence that the ores of these metals exist in abounding quantities, there ought to be no doubt as to the future of our mining industry, however much it may be regretted that operations are not being carried on with greater activity and enterprise than is now apparent.

Future of the mining industry.

Sale and Lease of Mining Lands.

The following table presents the number of patents issued in the several districts of the Province last year for mining lands, together with the acreage of the locations and the price paid therefor to the Treasury:

Mining lands patented.

Districts.	No. of patents.	Acres.	$
Rainy River	74	4,856	10,011
Thunder Bay	6	1,829	3,688
Algoma	2	315	927
Nipissing	2	202	561
Elsewhere	15	518	681
Totals	99	7,720	15,868

Nearly two-thirds of the whole acreage and three-fourths of the number of patents are to the credit of Rainy River district, which embraces the gold regions of Lake of the Woods, Rainy lake and the Seine river. By far the greater part of this land was taken up for gold, and the increase of 3,153 acres in area and forty-five in the number of locations over the transactions of the previous year shows how rapidly the district is advancing in the favor of prospectors. In the Thunder Bay district most of the land was taken up for iron ore. The average area of patented locations last year was 65.62 acres, while in 1894 it was 58.71 acres. In the price paid there was an increase over 1894 of $8,222, or 107½ per cent.

The next table gives the number and acreage of mining lands leased during the year, by districts, together with the sums paid into the Treasury for the first year's rental:

Mining lands leased.

Districts.	No. of leases.	Acres.	$
Rainy River	160	13,790	13,790
Algoma	3	231	231
Nipissing	8	783	783
Elsewhere	4	280	120
Totals	175	15,084	14,924

The total number of leases issued is greater than in 1894 by 109, the area covered by them is greater by 8,033½ acres or 114 per cent. and the receipts from rentals greater by $8,436 or 130 per cent. It will be observed that all but fifteen locations were taken up in the Rainy River district, where the number of leases issued was 112 more than in the previous year and the area of land taken up greater by 8,521¼ acres. Of mining lands leased and patented, the total number of locations for which patents and leases were issued last year was 274, embracing a total area of 22,804 acres, being in excess of the transactions of 1894 by 168 in number and by 12,482½ acres in area.

The comparative statistics of the four years 1892-95 exhibited in the following table present at a glance the transactions in mining lands during that period:

Comparative statistics for the years 1892-5.

——	1895.	1894.	1893.	1892.
No. of locations sold	99	40	63	65
Area of locations sold.....acres	7,720	3,271	4,370	6,200
Price of locations sold.....$	15,868.00	7,646.00	11,489.00	15,273 00
No. of locations leased	175	66	122	95
Area of locations leased ...acres	15,084	7,050½	13,046¾	13,122½
Rental of locations leased[1] ....$	18,211.16	10,296.56	14,669.76	12,917.36
Total number of locations	274	106	185	160
Total area of locations .....acres	22,804	10,321½	17,416¾	19,322½
Total revenue from locations ..$	34,079.16	17,942.56	26,158.76	28,190.36

The figures for 1891, the year in which the new mining law went into operation, are not given in this table because they embrace a very large number of sales carried out under the terms of the old law and are therefore not admissable for comparison. The popularity of the leasing system is shown by the much larger area of mining lands which have been leased than patented, the excess in the four years being 26,743 acres. The total area of mining lands leased since the system went into operation in 1891 is 53,302 acres, for which there has been paid into the Treasury rents to the amount of $60,980.84.

[1] Including rentals from lands leased in previous years.

SUMMARY OF MINERAL PRODUCTION.

Product.	Quantity.	Value.	Employés.	Wages.
		$		$
Building stone, rubble, etc.....	.....	438,000	850	296,000
Cement, natural rock.....barrels	55,219	45,145	45	14,166
Cement, Portland... .... "	58,699	114,332	129	46,000
Lime..... .....bushels	2,090,000	280,000	500	104,000
Drain tile.... ....number	14,330,000	157,000	2,126	364,000
Common brick ..... "	126,245,000	705,000		
Pressed brick, plain..... "	15,253,370	115,695		
Pressed brick, fancy..... "	2,312,497	24,075	183	69,442
Roofing tile..... "	375,000	6,200		
Terra-cotta.....	... .	38,500		
Sewer pipe.....	.....	133,159	99	38,308
Pottery	.....	108,000	150	45,000
Gypsum..... .....tons	3,373	7,471	24	6,500
Calcined plaster, etc. ..... "	444	13,095		
Mica..... ... "	25	2,900	16	2,210
Salt ..... "	51,009	188,101	133	56,496
Nickel . ..... "	2,315¾	404,861	655	209,960
Copper..... "	2,365½	160,913		
Gold..... ..... oz.	3,030	50,281	237	56,234
Petroleum .....imperial gallons	....	.....	.... ..	.....
Illuminating oil. "	10,924,826	1,237,328		
Lubricating oil. "	2,400,404	205,591		
All other oils... "	7,081,717	285,308	355	190,007
Paraffin wax ... . . .lb.....	1,964,228	86,608		
Fuel product	....	79,589		
Natural gas .....M cubic feet	3,320,000	282,986	92	73,328
Totals	....	5,170,138	5,383	1,571,651

Quantity and value of mineral production in 1895, with number of workmen employed and amount of wages paid for labor.

BUILDING MATERIALS.

The depression in business which has prevailed without interruption during the past four years has produced its natural effect upon the building trade, marked by a steady decrease in the demand for and the production of building materials. Evidence of the situation is found in the record of building operations in the city of Toronto. Permits granted show a value of $4,388,900 in 1891, of $3,921,755 in 1892, of $1,361,850 in 1893, of $1,020,225 in 1894 and of $1,346,810 in 1895. A slight improvement is observable in the last year, but this is too recent to have had any effect on the production of building materials, and the statistics show a steady falling off.

The following table gives the value of building stone, rubble and other products of the quarry for the five years, together with the amount of wages paid for labor in each of the five years:

Year.	Value.	Wages.
1891.....	$1,000,000	$520,000
1892....	880,000	730,000
1893.....	721,000	464,000
1894	554,370	336,700
1895..... ...	438,000	296,000

Building stone, rubble, etc.

For each of the last two years the value is only about one-half of the value for 1891, and in Toronto the values of building permits granted were less than one-third.

The next table, which gives for the same years the production of common brick in thousands, also shows a very large decrease, although not so marked as in the case of stone. The returns which have been received indicate that fully one-third of the brick-yards in the Province have been lying idle during the past year.

Production of brick and tile in the five years 1891-5.

Year.	Brick, No. of M.	Value.	Tile, No. of M.	Value.	Wages.
		$		$	$
1891	160,000	950,000	7,500	90,000	432,000
1892	175,000	980,000	10,000	100,000	445,000
1893	162,350	932,500	17,300	190,000	451,000
1894	131,500	690,000	25,000	280,000	388,000
1895	126,245	705,000	14,330	157,000	364,000

The same table gives the production and value of drain tile, and it is gratifying to find that the quantity has been largely increased. The farmers of Ontario have been making vigorous efforts to meet the competition which confronts them everywhere, and the drainage of the land is one of the most effective means for enabling them to get the surest and largest results as the fruit of their labor. The quantity of tile manufactured rose from 7,500,000 in 1891 to 25,000,000 in 1894, and while there was a drop of nearly 11,000,000 from 1894 to 1895 the quantity produced in the latter year was about double of the make in 1891.

Pressed brick, roofing tile and terra-cotta are given in the next table for five years:

Pressed brick, roofing tile and terra-cotta.

—	1895.	1894.	1893.	1892.	1891.
Number	17,940,867	25,456,000	21,634,000	22,048,000	13,617,909
Value	$184,550	$286,230	$217,373	$259,335	$156,699
Wages	69,442	95,400	80,686	88,865	58,000

The fine quality of pressed brick made in the country and its suitability for private and public buildings of the better class have combined to make for it a good market, and when the present depression has lifted it is almost certain that a very much larger quantity will be called for than has yet been produced in any one year. Indeed it is only seven or eight years ago since the first pressed brick was made in the Province. Previous to that all pressed brick used in the country was imported from the United States, and it was generally believed that we had not here any suitable clay for making the article. It is well known now that we have several grades of it, and an illimitable quantity, and that the quality of the brick and terra cotta made is of the very best.

The statistics of lime, another indispensable article for building purposes, is given in the following table for the five years 1891-5 :

Comparative statistics of lime production for 1891-5.

Year.	Bushels.	Value.	Wages of labor.
		$	$
1891	2,350,000	300,000	116,000
1892	2,600,000	350,000	120,000
1893	2,700,000	364,000	122,500
1894	2,150,000	280,000	108,000
1895	2,000,000	280,000	104,000

These figures bear a close relation to those of stone and brick, and the returns made to the Bureau by owners of lime-kilns show, as in the case of brickyards, that a large proportion of them are idle for want of a demand for their product.

TRAP ROCK FOR STREET CONSTRUCTION.

Trap rock as material for street construction.

A business which is capable of great expansion was begun last summer by the Powell and Mitchell Trap Rock Company of Bruce Mines, Ontario, and Marquette, Michigan, in the quarrying and exporting of trap rock to be used in the construction of boulevards or streets, principally if not altogether so far in the city of Cleveland, Ohio. The quarries of this company are situated on some small islands on the north shore of lake Huron, south of the township of Johnson. Last year their product was taken from Poole island, about two miles southwest of the mouth of Portlock river and about one mile and three-quarters southeast of Walker river. There are said to be about 100,000 tons of available rock on this island, while on Walker island the quantity is thought to be about 500,000 tons. At this latter place the company has in contemplation the erection of a dock for shipping purposes. Situated as the properties are on the deep waters of lake Huron, they enjoy the advantages which all-lake carriage and resulting cheap freight rates can give them. The rock is loaded directly out of the quarries into the vessels which discharge it on the docks at Cleveland. It is used at the latter place in the construction of carriage drives or boulevards in connection with the park system of the city, where about two miles of road 30 feet wide were built of it by the Board of Park Commissioners in 1895. Though its use there has so far been confined to roads of this sort intended for light travel only, for which purpose it has given eminent satisfaction, there appears to be no reason why it should not prove equally well fitted for heavy traffic streets with necessary changes in the method of construction. In the Cleveland boulevards the Telford-Macadam system of building roads is adopted, a foundation of hard limestone equal in quality to Mahoning valley limestone, ten inches in thickness, being first laid down. The Park Commissioners' specifications require that these stones shall be 4 to 10 inches in width, 8 to 20 inches in length, and not less than 10 inches in depth. They are laid on their broadest edges lengthwise across the roadway, and are bound by inserting and driving down stone of proper size and shape to firmly wedge them in place. Upon this foundation is spread the macadam made of broken trap rock. For the bottom course the stone is required to be crushed to a size that

Quarries on Poole and Walker islands, in lake Huron.

Boulevards in Cleveland parks.

will pass through a screen with $2\frac{1}{4}$-inch round holes and will not pass through a screen with 1-inch round holes. This is spread upon the foundation to such a depth that when thoroughly rolled its surface is two inches below the finished grade of the street. Fine screenings, such as will pass through $\frac{1}{2}$-inch round holes, are then spread on in at least three layers, each layer thoroughly worked in by wetting and rolling. Upon this coarse screenings, by which is meant broken stone which will pass through a screen with 1-inch round holes but will not pass through $\frac{1}{2}$-inch round holes, are laid and spread to a depth sufficient to bring the surface half an inch below finished grade. Fine screenings and dust are then applied to bring the surface up to grade. As to the quality of the road thus made, Messrs. W. H. Ford & Co., 128 Champlain St., Cleveland, contractors for the work, speak as follows, under date of October 19th., 1895:

Quality of the road.

"We have about completed a boulevard for the Park Commissioners of this city in which we have used 12,500 gross tons of the trap brought from Poole island, Georgian bay. . . We consider that we have the best road in the world, and it has been so pronounced by the different interested people who have visited this city and inspected it. They were here from Chicago, Detroit, Youngstown and other places. Having made a visit to several places in the eastern States for the purpose of examining the roads built of trap rock and comparing them with ours, we have no hesitation in saying that the trap rock used here is harder, freer from quartz or vein matter found in other trap rocks, and therefore better suited for road beds. .

This testimony is confirmed by Mr. F. C. Bangs, secretary of the Board of Park Commissioners, who says:

"We think we are building the finest road in America. Interested parties from Chicago and Pittsburgh have been here to see it, and expressed themselves as highly pleased with the same."

Cost of construction.

The total cost of building the roads, including foundations, gutters (for which Medina stone is used) and all other items of expense, was $3.10, $3.19 and $3.65 per square yard respectively for three separate sections. The road is therefore not a cheap one as built in Cleveland, the cost being greater than a pavement of either vitrified brick or asphalt, according to the experience of the city of Toronto. A comparative statement of the cost of the three pavements is as follows:

Light asphalt, 4-in. concrete, 2-in. asphalt	$2.10 per sq. yd.
Heavy asphalt, 6-in. concrete, $2\frac{1}{2}$-in. asphalt	2.60 "
Vitrified brick, on 4-in. concrete	2.25 "
Trap rock, 10-in. Telford foundation, 8 inches broken rock	$3.10 to $3.65 "

Characteristics of trap rock.

The name "trap" has no reference to either the chemical composition or mode of origin of the rocks to which it is applied, but was originally bestowed upon those varieties, such as basalt, which present a step-like appearance or an outline composed of a succession of platforms one above another. It is sometimes loosely used to designate a series of rocks differing widely in character, but eruptive in origin, occurring in dykes or overflows, and consisting essentially of felspar together with such minerals as augite, hornblende and chlorite. This series of rocks furnishes good material for roadmaking which

is largely employed in England and the countries of continental Europe. Specimens of the rock quarried on Poole island were examined by Dr. Coleman, and are described by him as follows:

Composition.

"One of them is dark green in color; the other has many reddish particles mixed with the green. They are rather coarse grained and massive. Examined microscopically, they prove to contain much the same constitution, badly weathered plagioclase felspar and augite largely changed to chlorite. Besides these minerals, quartz occurs in small masses or intergrown as pegmatite with the felspar, often about a felspar crystal as a nucleus. As accessory minerals one finds hornblende, magnetite and a little pyrite. The structure of the rock is between the ophitic and granitic, but more inclined toward the ophitic, so that the name quartz diabase is probably the most appropriate. In general, the somewhat obsolete term "trap" is applied to it. This rock probably occurs as large dykes or possibly as sheets representing an ancient volcanic outflow. It should prove as serviceable for road metal as the closely related melaphyres and basalts so much used in making the fine roads of southern Germany."

A solid cubic foot of the trap rock is said by the Powell and Mitchell Company to weigh 180 lb., while a cubic yard of the broken stone weighs 3,000 lb.

Supplies of trap in Ontario.

Some of our Ontario towns and cities may perhaps desire to emulate the example of Cleveland in the matter of well paved boulevards or drives, and if so, and their location is such as to admit of the transportation of the raw material by water, they are not likely to find a road covering of better quality than the trap or quartz diabase rock of which an immense supply exists in our own Province. On the north and northwest shores of lake Superior are areas thousands of square miles in extent whose overlying strata, as displayed in the summits of numerous hills, are composed of trappean rocks, the relics of volcanic action on a titanic scale in a long past age. The promontory of Thunder cape, the mass of McKay's mountain, the rocks of Pie island, the "Paps" on the east side of Black bay, are all composed of trap, as are also the formations on St. Ignace and Simpson's islands and about Point Porphyry. In some parts of the north shore the trappean rocks are of great thickness, having in places a depth of 6,000 to 10,000 feet. In its lower portions the overflow is usually massive and cystalline, but it becomes more amygdaloidal towards the top. From Pigeon river to the Kaministiquia, and from Thunder bay to Nipigon bay, the shore of lake Superior and the country to a considerable extent inland, including a large area north, west and south of lake Nipigon, exhibits this trap overflow in enormous development. Farther east, varieties of diabase or chloritic trap, says Dr. Chapman, "occur both in the form of dykes and intercalated bedded masses among the Huronian strata of lake Superior, as in Michipicoten island, as well as Gros Cap, Cape Mamainse, Point-aux-Mines, Goulais river and elsewhere."[2] On the north shore of lake Huron trap is of common occurrence, and dykes of the variety known as greenstone are found in the Madoc and Marmora region, and also on the St. Lawrence river below Kingston. That the whole of this almost illimit-

[2] Minerals and Geology of Ontario and Quebec, p. 189.

able store of rock would on trial prove suitable for road material cannot be affirmed, but there seems to be no reason why a large proportion of it should not. It can hardly be doubted that if trap rock came actively into demand, the Province of Ontario could furnish enough to cover all the streets of all the cities of North America for hundreds of years to come. Cheaper, because more accessible, materials are now employed in the construction of roads within our own land. The tough and durable trap when broken to proper size forms a much more lasting pavement than the soft limestone gravel of which our best country roads are now made, and if it could be supplied at low enough cost, its use would not be confined to cities and towns, but might also be extended to the prosperous and thickly settled agricultural parts of the Province, where easy travel and good roads are a prime necessity.

VITRIFIED BRICK FOR STREET PAVING.

The paving brick industry.

The immense development which the paving brick industry has undergone in the United States has made it very apparent that vitrified brick as paving material has "come to stay," and it is pleasing to record that the business has now fairly begun an existence in Ontario. The Ontario Paving Brick Company, of which Mr. A. E. Kemp is president, Mr. S. G. Beatty secretary-treasurer, and Mr. C. R. S. Dinnick manager, has erected a well-equipped factory for the manufacture of paving brick at Carlton, a short distance from the city limits of Toronto.

Factory at Carlton, near Toronto.

The works are fitted up with a Penfield brick plant, including a wire-cut machine, automatic cut-off table and re-press of sixty tons pressure; the nominal capacity being 30,000 brick per day of ten hours, but equal to turning out if required at least one-third more. There are two dry pans with necessary screens, and one large pug mill. The dryer, operated by artificial heat, has a capacity to dry 30,000 brick in twenty-four hours.

The plant.

Power is supplied by two large boilers and a Wheelock engine of 150 horse-power. The kilns are four in number, of the Eudaly down-draft type, and are capable of burning between 300,000 and 400,000 brick per month. Run of-mine coal is used as fuel. About fifteen days is required to burn a kiln, and about ten days more to cool off. Mr. Dinnick, the manager, has very strong ideas on the proper method of burning vitrified brick, believing that they should be exposed to a temperature sufficiently high to frit together the clay of which they are composed, but that they should not be over-burned or made glassy by excessive vitrification. In addition to proper burning, slow cooling is essential to a first-class annealed brick. The whole plant of the Ontario Paving Brick Company is of the most modern and approved kind, and is modelled on the best American factories.

Supplies of clay and shale.

The company has a little over 100 acres of land at Carlton, twenty-two acres at Campbellville in Halton county, and about two acres on the Humber river. On the Carlton property the deposit of clay suitable for paving purposes is three feet six inches thick, extending over most of the area, and underlying this is a bed about three feet in thickness which answers well for ordinary building brick. A mixture of the red or Medina shale which is brought from

Campbellville with that found at Carlton is used as raw material for the paving brick, and the result is highly creditable to Mr. Dinnick's skill and the efficiency of his plant.

Uses of the brick in Toronto.

Last year the company supplied brick for paving Selby street and a portion of St. Patrick street in Toronto, in addition to a considerable quantity required for the crossings of various other streets. This year part of Prince Arthur avenue next to Avenue road is being paved with the company's brick, and it is expected that several other streets will also be covered with this material. The sorry condition into which so much of the cedar block pavement in Toronto has fallen will necessitate immediate renewal of many miles of streets, and it would certainly be in the public interest to pave with vitrified brick rather than to lay down the discredited blocks again. No American paving brick are now being imported to Toronto. The price of the Canadain article is $14 per thousand, which is much less than the cost of American brick with freight and duty added. The company employs eight to twelve teams, and thirty-five to fifty men.

The technical education of clay-workers.

Clay is the raw material for a great variety of finished products, ranging from common building brick to the finest of chinaware. Some of these products involve a great deal of skill in their manipulation, and clay is of all raw materials one of the most difficult to handle. Its complexity of composition and its liability to variation call for the utmost care on the part of manufacturers if an article of equable quality is to be maintained, particularly in the highest classes of goods, and it would seem therefore that in no branch of manufacturing industry would scientific knowledge and technical training be more useful or better welcomed. In Ontario as yet our clay deposits have not been called upon to furnish the more expensive products of ceramic art, and there has hitherto been probably small demand for the technically qualified engineer in clay; but even in the United States, where the clay industries have reached a high degree of expansion, facilities for the technical education of clayworkers have been strangely lacking. Indeed it was only in 1894 that the first attempt was made in that country to provide for the clay industries means of education similar to those which have long been enjoyed for instance by workers in metals or textile fabrics. In June, 1894, the University of Ohio opened a department of Ceramics and Clayworking, with Professor Edward Orton jr. at its head, and provision was made for thorough instruction in all the branches of engineering bearing on ceramics, and especially in physics and chemistry as applied to the treatment of clays. Two courses of tuition are open; one covering two years only, "is designed to assist young men who have already been actively engaged in the ceramic industries, and who on account of mature years, or lack of means, or lack of previous educational advantages, are unable to avail themselves of the full and complete course, and yet who wish to increase their earning power or chances of promotion by fitting themselves for other than manual labor." The other course extends over four years, and is the full equivalent in both quantity and quality of work required of any of the other engineering courses offered by the University. It leads to the

The Ohio School of Ceramics.

degree of Engineer of Mines in Ceramics. Special facilities are afforded for the study of clays, clay-working machinery and methods, and small kilns and furnaces are provided for laboratory work, as well as pyrometers, manometers, and apparatus for determining the plasticity and physical structure of clays. The example of Ohio is worth imitating by many of her sister States, whose clay industries are now important, and also by Ontario, where wealth of raw materials awaits the hand of the skilled manipulator to transform it into manufactured products fitted to serve the wants or minister to the tastes of man.

Gold, Nickel and Copper.

The following table presents for the four years 1892 5 the statistics of gold mining in the Province:

Gold in the years 1892-5.

—	1892.	1893.	1894.	1895.
Mines worked .....No.	9	15	4	8
Men employed above ground "	85	112	40	126
Men employed under ground "	40	56	52	111
Ore mined.....tons	3,710	5,560	2,428	6,500
Gold product .....oz.	.....	1,695	2,022½	3,030
Gold value ... ...$	36,900	32,960	32,776	50,281
Wages paid for labor .....$	22,750	49,027	38,032	56,234

It can hardly be said that this industry is yet on a stable basis, as far as the figures of the table show the situation. The gold product is to a very large extent to be credited to one mine; the other seven in 1895 were yet in the development stage, and the money paid as wages for labor had scarcely begun to be recouped in bullion. A much better showing would be presented if the statistics were given for the calendar year, instead of being for the year ending 31st October, and when the current year's returns are obtained it will probably be seen that the labor expended on development work has begun to get its reward. At two or three mines a quantity of rich ore was mined of which no account is taken in values, as the gold had not been extracted from it within the year. One of these mines computes its ore on the dump at a value of $16,000.

The production of mines yielding nickel and copper ore and the quantity of ore smelted in the four years 1892-5, ending 31st October each year, is presented in the following table:

Percentage of metallic contents in ore.

Year.	Ore raised, tons.	Ore smelted, tons.	Per cent. of metallic contents in ore smelted.		
			Nickel.	Copper.	Cobalt.
1892.....	72,349	61,924	3.36	3.19	1007
1893.....	64,043	63,944	2.21	2.38	.0800
1894.....	112,037	87,916	2.92	3.14	.0721
1895.....	75,439	86,546	2.67	2.73	.....

For nearly the whole of last year only the mines and works of the Canadian Copper Company were operated; two of the o her companies had closed

down owing to the death of the principal men in each, and a third company had suspended owing to financial troubles. Yet it will be noticed that the quantities of ore raised and smelted in 1895 were larger than in 1892 or 1893, and the quantity smelted was nearly as large as in 1894 when the furnaces of four companies were in blast. The percentage of nickel and copper in the ores varies considerably, but the difference is not so great as to be significant; it was larger in 1895 than in 1893, though smaller than in 1892 and 1894, both of copper and nickel.

Comparative statistics of the industry are presented in the next table:

Comparative statistics for 1892-5.

—	1892.	1893.	1894.	1895.
Ore raised ..... tons	72,349	64,043	112,037	75,439
Ore smelted..... "	61,924	63,944	87,916	86,546
Ordinary matte .. .. "	6,278	7,176	10,410	12,525
Bessemerized matte ..... "	1,880	452	1,470	103½
Nickel contents... ..... "	2,082	1,653	2,570½	2,315¾
Copper contents. ..... "	1,936	1,431	2,748	2,365½
Cobalt contents..... "	8½	19	3¼	... ..
Value of nickel..... .....$	590,902	454,702	612,724	404 861
Value of copper .....$	232,135	115,200	195,750	160,913
Value of cobalt .....$	3,713	9,400	1,500	.....
Wages paid .. ..$	339,821	252,516	311,719	209,960
Men employed.....	690	495	655	444

The metallic contents were larger very considerably than in 1892 or 1893, but smaller than in 1894. Values too show a depreciation, no doubt as a result of improved processes in extracting and refining the metals, but especially the nickel. With the cheapening of this metal new uses are sure to be found for it which must increase the demand, and it seems probable that for no other object is it so likely to be required as for the manufacture of nickel steel. One company of bicycle manufacturers in the United States used last year 400,000 lb. of nickel in the form of nickel steel alloy, which is nearly one-tenth of the total product of the Ontario mines.

The values in the foregoing table are based on the selling price of the matte at the works, and employing the same data the prices of the metallic contents for the four years 1892-5 per ton and per pound are found to be:

Average selling price per unit of metal contents at Sudbury.

Year.	Nickel.		Copper.		Cobalt.	
	per ton.	per lb.	per ton.	per lb.	per ton.	per lb.
	$	cents.	$	cents.	$	cents.
1892.....	283.81	14.190	119.90	5.995	436.82	21.841
1893.....	275.08	13.754	80.50	4.025	494.73	24.736
1894.....	238.36	11.918	71.23	3.561	461.54	23.077
1895.....	174.83	8.741	68.02	3.401	.. ...	.....

The fall in price of both nickel and copper has been constant from year to year, and corresponds closely with the market quotations of the refined metals in the London market.

The number of employés at the mines and works for the several years 1892-5, classified as workers above and below ground and according to the ages regulated by law, are presented in the following table:

Comparative statistics of workmen and wages, 1892-5.

Year.	Workers of 15 to 17 years		Workers over 17 years		Total workers.	Total wages.
	above ground.	under ground.	above ground.	under ground.		
						$
1892	10	....	483	197	690	339,821
1893	10	....	356	129	495	252,516
1894	17	....	395	243	655	311,719
1895	7	....	341	96	444	209 960

The average number employed last year was less than in either of the three preceding years as a natural consequence of the closing down of three of the works for the greater part of the year. The average wage earnings per man however was nearly the same as in former years, being a little higher than in 1894 and a little lower than in 1892 and 1893. The average value of product per man employed is pretty steadily gaining. In 1892 it was $1,197; in 1893, $1,170; in 1894, $1,236; and in 1895, $1,285; and this result appears alongside a steadily falling price for the product. The explanation of it is no doubt to be found in the greater economy of working the mines, made possible by the larger openings and the more general use of improved mining machinery.

Gypsum and Salt.

Statistics of the gypsum industry.

The total quantity of gypsum mined last year was 3,373 tons, valued at $7,471. By far the greater part of the raw material was used for land plaster but the manufacture of calcined plaster, alabastine, etc., is a more important industry. For these last named purposes 444 tons of gypsum was utilized last year, and the total value of the articles produced was $13,095. The industry in all its branches of mining, calcining, milling, etc., gave employment to 24 workmen, whose yearly earnings for wages are returned at $6,500.

Fourteen works were employed last year in the production of salt in the counties of Bruce, Huron, Middlesex, Lambton and Essex. The following table gives the statistics of the industry for the four years 1892-5:

Salt manufactured in 1891-5.

——	1895.	1894.	1893.	1892.
Tons made	51,009	35,215	48,350	43,387
Value $	188,101	115,551	149,850	162,700
Wages $	56,496	43,350	44,440	37,800

In quantity made, in value and in wages paid for labor, 1895 exceeds each one of the preceding three years. No attempt has yet been made to mine the salt, although beds of great thickness exist at a moderate depth, ranging from 900 to 1,300 feet; at all the works it is produced by evaporating the brine, which either flows from or is pumped out of the borings. Heretofore no other industry has been established in the Province in connection with salt works, but during the present year a plant is in course of construction for the manufacture of soda ash.

PETROLEUM AND NATURAL GAS.

Variable character of statistics of the oil industry.

It is difficult to procure statistics of the petroleum trade which can be accepted as perfectly reliable, inasmuch as the several independent sources of information differ somewhat widely in the figures they supply. Returns received by the Bureau from all the refineries show that the quantity of crude distilled in 1895 was 25,223,785 imperial gallons, and used for fuel 2,213,639 gallons, making a total of 27,437,424 gallons; and that the quantity of illuminating oil produced was 10,924,826 gallons. The monthly statement of railway shipments from Petrolea shows that the quantity of crude carried out was 232,282 barrels, or 8,129,870 gallons, and of refined 311,962 barrels, or 10,918,670 gallons, being a crude equivalent in all of 1,012,185 barrels, or 35,426,475 gallons. The Canada Statistical Abstract and Record, which claims to supply "the only trustworthy statistics of Canadian production of oil that are available," gives the quantity of refined oils inspected last year as 10,928,894 gallons,[3] or a calculated crude equivalent of 28,760,247 gallons, but not including the quantity of crude oil used as such. In this calculation a gallon of refined has a crude equivalent of 2.63 gallons, whereas in the shipments from Petrolea the equivalent is 2.50 gallons. But according to the returns made to the Bureau 2 31 gallons of crude produce a gallon of refined, on which basis the total of crude and refined shipped from Petrolea in the year would be 33,351,997 gallons instead of 35,426,475 gallons as shown by the monthly statements. The returns of the refineries made to the Bureau however give only the quantities of crude which were distilled and used as fuel, an aggregate of 27,437,424 gallons, and not the total product of wells during the year, or the quantities shipped by rail. It is certain also that the whole of the crude oil shipped from Petrolea was not refined elsewhere, as the two outside refineries which were operated during the year did not treat much more than 20 per cent. of it. The quantity of refined oils reported by the Canada Statistical Abstract and Record is very nearly the same as the Bureau's returns, being larger by 4,068 gallons or 116 barrels. The following table from the same authority gives the product of refined oils and their crude equivalent in imperial gallons for the ten years 1886-95:

Refined oils and the crude equivalent.

Production of refined oils in the ten years, 1886-95.

Year.	Refined oils.	Crude equivalent calculated.
1886	8,149,472	21,445,979
1887	8,243,962	21,694,637
1888	9,545,895	25,120,776
1889	9,462,834	24,902,195
1890	10,121,210	26,634,763
1891	10,270,827	27,028,492
1892	10,238,426	26,943,227
1893	10,683,806	28,115,278
1894	10,825,350	28,487,763
1895	10,928,894	28,760,247

[3] A letter to the Bureau of Mines from the Inland Revenue Department under date of February 25 says: "The total number of gallons of Canadian oil inspected in 1895, according to the books of this Department, was 10,674,232 gallons."

Percentages of products distilled from the crude.

For each of the above years the crude equivalent is calculated on the ratio of 1 to 2.63, which was probably correct enough for the earlier years; but with improvements in the process of refining, a larger proportion of illuminating oils is obtained from the crude now than formerly. The proof of this is furnished in the following table, which gives the percentages of the several products, except paraffin and fuel materials, obtained at the refineries in each of the four years 1892-4:

Product.	1895 p.c. of crude.	1894 p.c. of crude.	1893 p.c. of crude.	1892 p.c. of crude.
Illuminating oils	43.31	41.10	39.12	38.37
Lubricating oils	9.51	10.91	12.45	12.35
All other oils.....	28.075	30.45	28.14	27.34
Totals	80.895	82.46	79.71	78.36

Evidence of progress in modes of treatment.

In those four years the proportion of illuminating oils extracted from the crude has increased steadily each year, until in 1895 it was 4.64 per cent. more than in 1892. The proportion of lubricating oils has decreased 2.84 per cent., and that of all other oils has remained very nearly the same; but the average of all oils extracted from the crude has been raised by 2 53 per cent. At the same time the quality of the illuminating oils has been so much improved that they are now little if at all inferior to the best American. The quality of the crude remains as formerly, with its high percentage of sulphur.

Shipment statistics.

The statement which follows gives the monthly shipments of crude and refined oils by rail from Petrolea for the year 1895, and the totals calculated in crude equivalent at the ratio of 1 to 2½. The measure is in imperial barrels of 35 gallons per barrel.

Monthly shipments of crude and refined oils from Petrolea by rail in 1895.

Month.	Crude.	Refined.	Crude equivalent.
January.....	21,155	27,323	89,462
February	18,810	25,875	83,497
March	17,380	19,825	66,943
April	15,400	17,955	60,287
May	18,165	18,382	64,120
June	15,670	17,725	59,982
July	18,985	17,370	62,410
August	17,335	24.335	78,173
September.....	20,772	32,615	102,309
October	24,970	46,727	141,787
November	19,890	32,484	101,100
December	23,750	31,346	102,115
Totals.....	232,282	311,962	1,012,185

On the basis of 1 to 2.31, which is the ratio of refined to crude equivalent computed from last year's returns to the Bureau, the total of crude equivalent would be 952,914 barrels, or 33,351,997 gallons, and in reckoning the value of crude oil this estimate will be taken.

The following table gives the weekly market prices of crude at Petrolea and Oil Springs for 1895, and of refined in car lots, from which are deduced the averages for each month and for the year :

Market prices.

Weekly prices of crude and refined oils in 1895, and averages per month and for the year.

Month.	Petrolea crude.	Oil Springs crude.	Refined in car lots f. o. b.	
			cents per gal. in bulk.	cents per gal. in bbls.
	$ per bbl.	$ per bbl.		
Jannuary. 3	1.16½	1.17½	7	9¾
10	1.16½	1.17½	7	9¾
17	1.16½	1.17½	7	9¾
24	1.16½	1.17½	7	9¾
31	1.16½	1.17½	7	9¾
February. 7	1.16½	1.17½	7	9¾
14	1.16½	1.17½	7	9¾
21	1.20	1.22	7	9¾
28	1.25	1.27	7½	10¼-10½
March ... 7	1.25	1.27	7½	10¼-10½
14	1.26	1.28	7½	10¼
21	1.30	1.32	7½	10¼-10½
28	1.31½	1.33	7½	10¼-10½
April ... 4	1.34	1.36	7½	10¼-10½
11	1.36	1.38	7½	10¼-10½
18	1.55	1.57	12-12½	15
25	1.77½	1.79½	12-12½	15
May 2	1.75	1.77	12	15
9	1.60	1.62	12	15
16	1.60	1.62	12	15
23	1.50	1.52	12	15
30	1.50	1.52	12	15
June 6	1.50	1.52	12	15
13	1.50	1.52	12	15
20	1.50	1.52	12	15
27	1.50	1.52	12	15
July 4	1.50	1.52	12	15
11	1.50	1.52	12	15
18	1.50	1.52	12	15
25	1.50	1.52	12	15
August .. 1	1.52	1.54	9¾	12¼
8	1.52	1.54	9¾	12¼
15	1.53	1.55	9¾	12¼
22	1.53	1.55	9¾	12¼
29	1.53	1.55	9¾	12¼
September 5	1.53	1.55	9¾	12¼
12	1.53	1.55	9¾	12¼
19	1.53	1.55	9¾	12¼
26	1.55	1.57	9¾	12¼
October .. 3	1.55	1.57	9¾	12¼
10	1.55	1.57	9¾	12¼
17	1.55	1.57	9¾	12¼
24	1.55	1.57	9¾	12¼
31	1.55	1.57	9¾	12¼
November 7	1.58	1.60½	9¾	12¼
14	1.60	1.63	9¾	12¼
21	1.68	1.71	9¾	12¼
28	1.74	1.77	10	12¾
December 5	1.70	1.72	10	12¾-13
12	1.70	1.72	10	12¾-13
19	1.70	1.72	10	12¾-13
26	1.70	1.72	10	12¾-13
Monthly averages :				
January	1.16½	1.17½	7	9¾
February	1.19½	1.21	7	10
March	1.28	1.30	7½	10½
April	1.50½	1.52½	10⅝	12
May	1.59	1.61	12	15
June	1.50	1.52	12	15
July	1.50	1.52	12	15
August	1.52½	1.54½	9¾	12¼
September	1.53½	1.55½	9¾	12¼
October	1.55	1.57	9¾	12¼
November	1 65	1.68	9¾	12¼
December	1.70	1.72	10	12½
Yearly averages	1.47⅛	1.49¼	9.8	12.5

The petroleum of the Oil Springs field is of a better quality than that of the Petrolea field, and is quoted usually at two cents per barrel higher. The yield however is so much less that in computing total values the average quotations for Petrolea crude may be taken. The quotations for refined oils are given for car lots, in the first column in bulk and in the second in barrels—the difference ranging from 2½ to 3 cents per gallon, and the average for the year 2.7 cents. The weekly quotations of crude and refined show an upward tendency throughout the year, the highest averages for the former being reached in November and December, and for the latter in May, June and July.

Production and values of crude oil in the five years 1891-5.

The following table gives the quantity of crude petroleum produced in the two fields for each of the five years 1891-5, and the value of it computed from the average prices for crude :

Year.	Imperial gals.	Value.	Value per gal.
		$	cents.
1891	31,312,645	1,209,558	3.863
1892	28,000,000	1,000,000	3.571
1893	34,055,000	1,099,868	3.230
1894	34,912,360	1,094,852	3.136
1895	33,351,997	1,403,960	4.209

Comparative values.

The crude product for 1895 is the estimate based on shipments and the ratio of 1 to 2.31. The value is computed from the yearly average of Petrolea quotations, viz.. $1.47⅓ per Imperial barrel, although in the returns made to the Bureau by refiners the average would be $1.57. Compared with the four preceding years, the average per gallon is seen to be decidedly better, ranging from a third of a cent per gallon in 1891 to a little more than one cent in 1894. The lowest point appears to have been touched in January of the latter year, when the price of crude was 92 cents per barrel. In August it rose to 95 cents, in September to 98 cents, and in October to $1.11¼. From the latter month to December of last year the price rose steadily until it reached the maximum of $1.70.

Products of refineries in 1895.

In the next table is given the statistics of products of the refineries for the year 1895 :

Product.	1895.	
	Quantity.	Value.
		$
Illuminating oils.. .....gal.	10,924,826	1,237,328
Lubricating oils..... ..... "	2,400,404	205,591
All other oils .... "	7,081,717	285,308
Paraffin wax .....lb.	1,964,228	86,608
Fuel product	.....	79,589

This table is compiled from returns sent in by all the refineries operating in the Province, and shows the products of 25,223,785 gallons of

crude oil treated during the year. The total value, including fuel product, was $1,894,424 ; the average number of workmen employed in the refineries was 355, and the amount of wages paid for labor $190,007.

No. of producing wells,

On 30th September of last year, Mr. Noble informs me, the total number of wells in the Petrolea field was 6,787, and in the Oil Springs field 3,176, making a total of 9,963. Four years ago the number was only 5,088, whereof 3,535 were in Petrolea and 1,553 in Oil Springs. In several outlying fields a few wells have been bored during the past ten years, whose output is delivered at Petrolea. On the fourth concession of Euphemia, four miles northeast of Shetland village, about thirty wells have been drilled. Most of these were completed ten years ago, and one on John Fimby's farm yielded 20 to 30 barrels per day for a year ; it is now closed, having been flooded by water. On Richard Dobbyn's farm a well yielded 100 barrels per day for a few days only ; Mr. Dobbyn was offered $20,000 for it, which he refused. The present average yield of six producing wells in the locality is only one-half barrel per day. Two wells drilled in 1894 yielded for a short time 20 to 30 barrels per day. Five new wells were in course of being sunk in November last. In the southwestern corner of Plympton about a dozen wells exist, the product of which is pumped to Petrolea through pipe lines. In the old Bothwell field the good price of crude has led some enterprising men to undertake boring operations again, although the field has been abandoned for more than thirty years, and a hope is entertained that good flows may be struck at a depth of 1,400 to 1,600 feet. On Pelee island also several test wells have been drilled, and at two of these on the western side of the island oil was struck. The second one is on the farm of John Finlay, and on 9th March oil was reached at a depth of 750 feet, accompanied with gas. When the reservoir was struck the oil spurted out of the well to the height of the derrick, 35 feet, but the flow appears to have been intermittent. Other wells have been bored for oil and gas upon the mainland, near Leamington.

and the several areas of production.

Euphemia.

Plympton.

Bothwell.

Pelee island.

Drilling new wells in the Petrolea field.

The contract price for drilling wells in the Petrolea field is about $110, the oil being usually reached at 460 to 465 feet. Forty sets of tools were running last year in the territory, much greater activity having been shown since the price of crude has gone up. One rig, working in day time only, will complete a well in two weeks, and the average number of wells drilled is about 80 per month. About 100 wells are abandoned every year, but this is owing to local obstructions and not to failure of oil, it being found cheaper to drill a new well than to clean out an old one. In the early days of the industry many wells were abandoned which now would be regarded as first class yielders ; and as none of these wells were plugged the gas was allowed to escape freely, the result of which has been, in the opinion of some careful observers, a reduction of pressure upon the oil held in the the rock and a consequent falling off in the daily production. New wells will average 1 to 1½ barrels per day for a month or six weeks, when they gradually fall off to a rate of 8 to 10 barrels per month. But there are exceptions. In July, 1873, Mr. W. K. Gibson drilled a well upon a five-acre lot on Durham creek, lot 14

Production of the wells.

in the tenth concession of Enniskillen, which for a long time pumped 40 to 50 barrels per day, and after a period of two years he was shipping from it 900 barrels per month. In 1890, when Mr. Gibson sold the property, this well was producing 105 barrels per month, and he states that the present yield is 75 barrels per month. The Barnes wells, which occupy 48 acres of lot 9 in the fourteenth concession of Enniskillen, were bored in June, 1893, and began with a yield of 75 barrels per day. In May, 1895, the property was purchased by Mr. John Fraser, and he informs me that the yield of the two wells is now 550 barrels per month. It is Mr. Englehart's belief that if wells were bored down to reach the Trenton formation oil would be struck to rival that of the Ohio fields. In 1881 his company sunk one well to a depth of 1,505 feet, but abandoned the work before reaching the Trenton. Salt was struck at 1,087 feet, and the drill went through three or four beds until at 1,380 or 1,390 feet it reached one of pure solid salt, continuous to 1,505 feet without getting through it.

Stocks of crude oil.

Ten years ago it was the custom to hold in stock about 500,000 barrels of crude, for which purpose underground tanks were constructed 60 feet deep and 30 feet diameter, sunk in an impervious blue clay and lined with a wooden curb. Now the stocks are very light, not exceeding 50,000 barrels.

Imperial refinery works.

The Imperial refinery works, of which Mr. Englehart is manager, have a capacity to treat 750,000 barrels per annum. All grades of illuminating and lubricating oils are produced, as well as wax and grease. Improvements are made chiefly in lubricants, which are refined, re-distilled, reduced, filtered and pressed, to turn out various grades. By filtering through charcoal a grade of oil is obtained which is required for dynamo machines and other fine purposes. It has been demonstrated by tests at these works that Canadian oils thoroughly desulphurized give better light and burn longer than the best American. There are always some changes and improvements being made, Mr. Englehart informed me, but thoroughly desulphurized oils have been on the market for two or three years. Candles of all kinds are manufactured from paraffin, colored and white, compound, miners' composite, and many others according to use. Much of the oil product is shipped away in large boiler tanks, but much of it is also put up in barrels, and for this purpose the works require 50,000 to 60,000 barrels a year. Formerly these were made chiefly of oak, but as this timber is now growing scarce elm is being used in its stead and is made oil-tight by giving to it a double coating of glue. A smaller percentage of empties comes back now than was the case in past years, as many are being used as packing cases for the nickel and copper matte shipped from the smelting works at Sudbury.

National Oil Company's works.

The National Oil Company was organized two years ago to carry on the business formerly owned by Mr. John Macdonald, but Mr. Macdonald himself is president and manager, as well as the principal stockholder. There is only one well on the premises producing crude, but on Mr. Macdonald's farm two miles north of the works there are fifty wells whose product is delivered by pipe line to the refinery. The company buys 4,000 barrels of crude per week, which is the capacity of the works when running full time. They produce

illuminating and lubricating oils of different grades, paraffin wax, benzine, gasoline, etc., besides manufacturing candles and binding twine oil. The latter has got to be free from acids of all kinds, must not evaporate at under 250° F., and is required to contain 50 per cent. pure paraffin wax. The company claims that it is producing this quality, which is sold in tank car lots in Toronto at 11 cents per imperial gallon. "This oil is as good as if not better than the imported oils," Mr. Macdonald says, "yet at the Central Prison twine works the imported oil is used instead, on the pretence that it is freer from acids which would injure the fibre of the twine. This is not the case, for there is no question that the binding twine oil made at our works is perfectly free from acids." The company is now adopting steel barrels for shipping the products of the refinery, and a lot of 1,000 was in course of being made at the time of my visit to the works.

Fairbank, Rogers & Company's works.

Fairbank, Rogers & Company was organized in 1892 as a partnership concern. The works are on the 12th line of Enniskillen, on the northern side of Petrolea, and at the terminus of the M. C. R. track. The firm is not directly interested in the production of crude oil excepting to the extent of a few wells on the property. But Mr. Fairbank is the largest producer in the country. He owns about 300 wells in different parts of the oil territory, including those of lot 18 in the second concession of Enniskillen—which is perhaps the best tract in the whole region. The works have a capacity to treat 2,000 barrels per week, and they produce illuminating and lubricating oils, gasoline, naptha and wax. The illuminating oils are of two grades, water white with a specific gravity of .786, and prime white .802. The lubricating oils are of various grades, among which are cylinder oils of superior quality for the use of railways, that until a year ago were supplied by American manufacturers. The total quantity consumed in the country is about 6,000 barrels per annum. Black oils are also shipped to India as grease for car axles. These oils formerly found a market in the United States, but are now excluded under a tariff which provides for free reciprocal trade; otherwise the duty is doubled. The paraffin wax is largely made up into candles, but is also used for other purposes. The whole product of this refinery is handled by Samuel Rogers & Co. of Toronto.

Petrolea Oil Company's works.

The refining works of the Petrolea Oil Company were established in 1872 by Messrs. Cochrane & Williams; but the principal owners now are Messrs. Charles Jenkins and John D. Noble, who are also largely interested in the Petrolea Crude Oil and Tanking Company. The refinery has a capacity of 100,000 barrels of crude a year, and produces gasoline, benzine and the illuminating and lubricating oils. The tar which produces wax is sold to the other refining works. Speaking of the relative merits of American and Canadian oils, Mr. Jenkins said: "The American crude produces a higher percentage of fine than the Canadian. Perhaps also it gives better light, but it burns faster. Our oil requires a higher draft to supply oxygen for the flame, and until recently lamps were not made for Canadian oils. But with a suitable lamp, such as the Excelsior, the Sun Hinge burner and the Climax burner, which give strong draft and high heat, a fine flame is produced. One gallon of Canadian oil will last as long as 1⅓ gallon of American. The Rochester lamp is a failure with our

Relative merits of Canadian and American oils.

oils. The old Sun burner too, so common in country places, is offensive in odor and smoke. What is wanted is a lamp that gives a good supply of oxygen to increase combustion."

NATURAL GAS.

Statistics of the natural gas industry.

The statistics of the natural gas industry for the three years 1893-5 are presented in the following table:

—	1895.	1894.	1893.
Producing wells ..... No.	123	110	107
Gas product ..... M cu. ft.	3,320,000	1,653,500	2,342,000
Value of gas .....$	282,986	204,179	238,200
Miles gas pipe	248	183½	117
Workmen ..... No.	92	99	59
Wages for labor .....$	73,328	53,130	24,592

The number of new wells bored during the year was 27, of which 19 were producing wells. These were fairly distributed between the Essex and Welland fields, but the non-producing wells were with one exception in the latter. The large increase in production took place in the Essex field, as a result of the laying down of a pipe line connecting the wells with Windsor, Walkerville and Detroit. Perfectly reliable figures of production however are not procurable; they are to a large extent estimates, and therefore it is hardly safe to venture upon comparisons, especially of product and value. In previous reports of the Bureau accounts were given of the principal companies operating in Welland county. The following account is now furnished of the largest company operating in the county of Essex, the details of which were obtained from the general superintendent in the mouth of November last.

The Natural Gas and Oil Company of Ontario, and its operations in Essex county.

The Natural Gas and Oil Company of Ontario grew out of the Ontario Natural Gas Company, which bored the pioneer well near Kingsville in 1888-9, striking gas January 29th of the latter year. The new company is really the old one with a new name, and has for its president Hiram Walker, for its managing director Dr. King, and for its general superintendent S. T. Copus, with head office at Walkerville. The total number of producing wells owned by the company (Nov. 22, 1895), is 14, located in the townships of Gosfield and Mersea, south of the second concession line of both townships. Their depth averages about 1,000 feet, the deepest being 1,050 and the shallowest 980 feet, varying according to the thickness of the surface drift. The gas producing region as far as proved has a width of two miles from the lake northward, by a length of twelve miles east and west. The total capacity of these wells is computed to be 60,000,000 cubic feet per day of 24 hours, but only a certain number of them are allowed to flow; indeed at this date only six are connected with the pipes, but others will be joined very shortly. Then the intention is to use groups of wells alternately. A pipe line of 8 inches diameter along the track of the Erie Railway was commenced in May, 1894, and on 1st August gas was delivered through it to Walkerville.

In September and October of the same year a pipe service was laid down in Windsor, and the total length of line from the field to Windsor is 35 miles. On 30th November connection was made with Detroit, where the gas is used chiefly for domestic heating and cooking purposes. In Windsor and Walkerville, where there are over a thousand services, it is used for steam-making in Walker's distillery, in breweries and salt works, and by the Electric Railway Company, the Electric Light Company and the city waterworks, and generally for domestic purposes, but not for lighting. A second pipe line was laid down last year and finished in October. It is a telescope pipe, one-half or a little more of its length being 8 inches and the second section 10 inches diameter. This has been laid down along the public highway, instead of along the railway track, and is consequently less liable to be jarred and broken by passing trains. It is also shorter than the first line by about five miles. A record is made every half hour of pressure at the field, as well as of temperature and of the force and direction of the wind, and this record is telegraphed in to the head office to be compared with a similar one kept there. From the time that the pipe line was opened it is stated that the rock pressure has been steadily maintained at 410 lb. per square inch.

Other companies operating in Essex.

The Essex Standard Oil Company has bored three wells in the same territory as the Natural Gas and Oil Company, but had not commenced to supply gas for consumption. Mr. Edward Harris of Kingsville is the manager. The Kingsville Gas Company supplies that village. A well in Leamington is owned by the corporation.

Surface gas wells in Kent and Elgin.

There are many surface wells in Kent and Elgin, especially in the townships of Harwich, Howard, Orford and Aldborough, but the supply of gas serves only for private use. In the northwestern part of Aldborough, near the limits of the old Bothwell oil field, there are 25 or 30 of those wells, which supply fuel to the farmers on whose lands they are.

Natural Rock and Portland Cements.

Statistics of the production of natural rock and Portland cements are given in the following table for the years 1894 and 1895 :

Production of natural rock and Portland cements.

	Natural rock cement.		Portland cement.	
	1895.	1894.	1895.	1894.
Number of works.....	5	5	2	3
Number of workmen....	45	63	129	105
Wages for labor	$14,166	$13,020	$46,000	$31,858
Product, bbl	55,219	55,323	58,699	30,580
Value	$45,145	$48,774	$114,332	$61,060

The production of natural rock cement remains nearly stationary, but the Portland variety shows a marked increase, the quantity having been nearly doubled although the number of establishments engaged in the manufacture of it was less by one. The great demand for Portland cement as material for street construction in the large cities, as well as for Government

works, has no doubt encouraged this industry at home; yet the quantity manufactured is only a small part of what is required. The following table shows how much the country requires above the home production, being the quantity and value of imports of Portland cement for home consumption for the eight fiscal years ending June 1895:

Imports of Portland cement in the eight years 1886-7 to 1894-5.

Year.	Barrels.	Value.
1886-7	102,750	$148,054
1887-8	122,402	177,158
1888-9	122,273	179,406
1889-90	192,322	313,572
1890-1	183,728	304,648
1891-2	187,233	281,553
1892-3	229,492	316,179
1893-4	234,231	284,964
1894-5	196,281	242,813

This statement however does not include the Portland cement imported for the use of the Dominion Government, which under the provisions of the Customs Act is brought in free of duty.

Graphite in Brougham.

Discovery and development of graphite in Brougham township.

A large and apparently valuable deposit of graphite was brought to notice during the year, situated on the south side of Whitefish lake, on lot 18 in the third concession of the township of Brougham, in the county of Renfrew. The actual discovery was made some years ago, but at that time the deposit was thought to be of limited extent. Prospecting operations at a later date however made it apparent that the body of mineral was of very considerable size. So far as uncovered the vein or deposit has a length of 300 feet, and four cross-cuts made at intervals of 50 feet show a width respectively of 12, 17, 18 and 24 feet. Borings were made with the diamond drill at various points. One bore hole close to the edge of the lake passed through 39 feet of graphite; this was succeeded by 6½ feet of mixed limestone and graphite, and this again by 10 feet of graphite; 7 feet of limestone and graphite mixed followed, then 1½ feet graphite and 2 feet felspar and quartz. In another hole farther from the water 15 feet and 6 feet of graphite were separated by 7 feet of graphite and lime-

Occurrence and quality of the mineral.

stone. The deposit is not homogeneous, calcite occurring in nests and irregular masses, but containing also disseminated graphite and minute mica crystals. The quality of the mineral itself is somewhat lowered by the presence of this calcium carbonate, occasionally to such a degree as to render it useless. The lowest grade so far found contains 49 per cent. carbon, and the highest 85 per cent. An assay made by J. T. Donald, M.A., of Montreal, showed the following composition:

Composition.

Graphite	84.12	per cent.
Silica	1.98	"
Alumina	1.56	"
Iron oxide	1.85	"
Lime	3.42	"
Magnesia	2.41	"
Carbonic acid	4 66	"
	100.00	

Mining and treating the graphite.

The graphite has a grayish aspect, is very hard, and occurs in a flaky and also in an amorphous condition. The deposit is veinlike in the manner of its occurrence, being embedded in gneiss, and striking in a northeast and southwest direction. Four hundred and seventy tons of the mineral have been mined and shipped to Ottawa, where a mill for its treatment is in course of erection. The lot was originally located to John Moore under the Free Grants Act, and on the discovery being made Moore took out the Crown patent of the mining rights of lots 17 and 18, containing 167 acres in all. Senator McKindsey of Milton interested himself in the matter, and a company has been formed to work the deposit and manufacture the graphite into crucibles, lubricators, polish, foundry facing, and whatever other products it may prove suitable for. The company is known as the Ontario Graphite Company, with head office at Ottawa, and the capital stock is $200,000. The chief officers are: S. H. Fleming, president, George A. Brophy, vice-president, and Hector McRae, secretary-treasurer.

Mica Boiler and Pipe Covering.

Mica as a non-conductor of electricity and heat.

The increased use of electric power during recent years has led to a largely increased demand for mica for insulating purposes, experience having shown that this mineral possesses the property of being impervious to the electric current in a very high degree. But the producers of mica have not found in the electric demand any relief from the state of affairs which was a continual source of loss to them before it began. Large sizes and good shapes of mica, such as are required for insulation purposes, were always marketable, but the difficulty still remained of disposing of the waste or scrap which forms so large a percentage of the output of mica mines and accumulates so rapidly at mica cutting works. Through the ingenuity of Mr. H. C. Micheli of Toronto this waste mica has now a value, though no doubt a small one as compared with that of the merchantable sizes. It is being utilized as material from which to manufacture coverings for boilers and steam pipes to prevent or lessen the loss of heat by radiation, mica being a good non-conductor of heat as well as of electricity. The scrap mica blocks are first put through a series of corrugating rolls which loosen the laminæ; these are finally separated from one another by air currents, after which the sheets are again put through a process which corrugates them singly. They are then laid between light galvanized wire netting, made into webs of a thickness suitable for the particular purpose they are intended to serve, and stitched with wire on a machine the first of its kind yet made. The flexible web of mica is covered with canvas stiffened at the back with millboard, and rounded into the desired shape. The covering when finished is fastened on the pipes by firmly lacing the edges together.

Its new use as material for coverings of steam boilers and pipes.

Works of the Mica Boiler Covering Co.

The company is called the Mica Boiler Covering Company (Limited), Mr. Herbert C. Hammond being president, Mr. J. J. Kingsmill vice-president, and Mr. H. C. Michell managing director. The company's manufactory is at 9 Jordan street, Toronto, where it employs about twenty hands. Although in business

only about a year, the demand for the company's output has risen so steadily that its present quarters are felt to be too cramped, and larger accommodation will soon be necessary.

Results of tests of the mica covering.

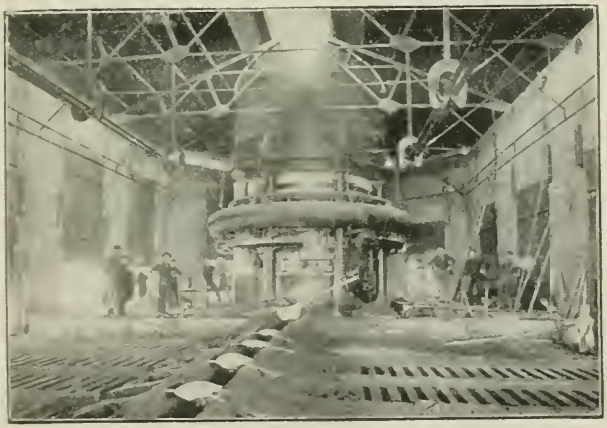
The scrap mica, of which about a ton per day is used, is procured mainly from the Ottawa district of the Province, and the company pays for it at the rate of about $5 per ton on the spot, or about $7.50 per ton delivered. The amber variety is preferred, on account of its more perfect cleavage. The company's product comprises all sizes of steam pipe covering from one-half inch in diameter upwards, and coverings for locomotive and marine boilers. Tests made on various occasions have, it is stated, shown its superiority in checking the radiation of heat to any of the other coverings commonly used for this purpose. A competitive trial made by the Canadian Pacific Railway in April of the present year gave really remarkable results in favor of the mica covering. An iron tank covered with it $1\frac{1}{2}$ inches thick was filled with water, which was raised to the boiling point and the fire withdrawn. For between 15 and 20 minutes the water continued to boil; at the end of the first hour the temperature had fallen to 210°; at the end of the second hour to 206°; at the end of the third hour to 202°; at the end of the fourth hour to 197°; at the end of the fifth hour to 192°; at the end of the sixth hour to 187°, and at the end of the seventh hour to 181°. The water in an uncovered tank was four degrees cooler at the end of an hour and a half than that in the mica-covered tank at the end of the seventh hour. Tests made by the Boiler Inspection and Insurance Company of Canada also showed not only that the mica covering effected great saving in weight of coal used and quantity of water evaporated, but that in the opinion of Mr. G. C. Robb, the company's engineer, it was "the most effective and convenient boiler covering on the market." Several large buildings in Toronto have been fitted up with this covering; among them the new dental college on Avenue street, and the R. Simpson company's large new store on the corner of Yonge and Queen streets. The Niagara River Navigation Company's newly launched steamer, the Corona, is also equipped with the mica covering on her boilers and pipes.

Carbide of Calcium.

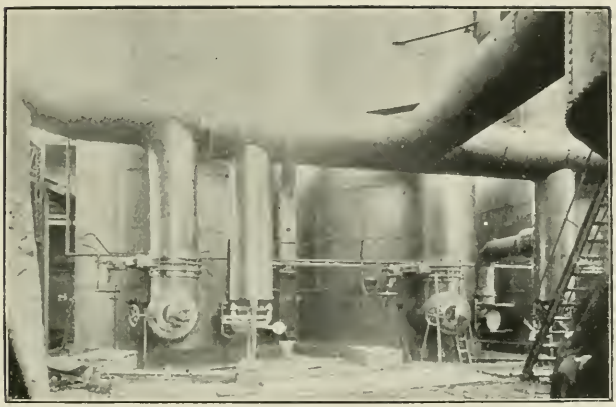
Potentialities of the carbide of calcium.

Probably no discovery or invention of recent years—excepting, perhaps, that of the Roentgen rays—has excited greater or more widespread interest in the world of economics than the process of manufacturing calcium carbide hit upon by T. L. Willson, an account of which was given in the Report of the Bureau of Mines for 1894. As the raw material from which, by the mere contact with water, acetylene gas is evolved, calcium carbide places at the service of the user of illuminants a gas whose combustion gives a light twelve to fifteen times as brilliant as that of ordinary coal gas, and therefore an article of which a correspondingly smaller quantity is required to produce an equal effect. As the basis of a whole host of compounds of commercial importance, calcium carbide is perhaps of even greater potential value than as an illuminating agent. In this remarkable union of two such common materials as lime and carbon, indeed, lie probabilities and possibilities which may well bewilder

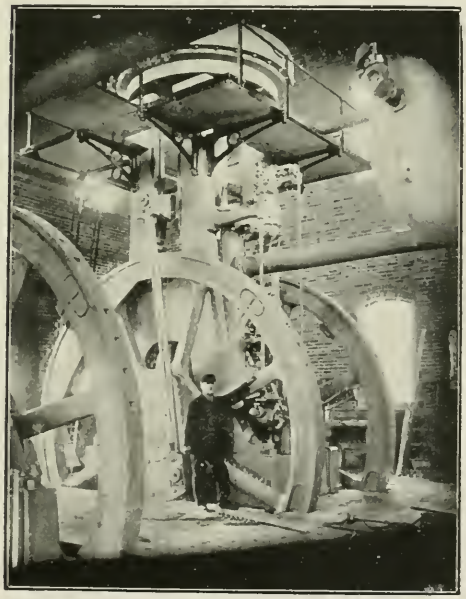
Hamilton blast furnace works, showing stockhouse, hot-blast stoves and office, p. 41.



Hamilton blast furnace works, showing furnace and cast room, pp. 42 and 45.



Stoves for generating hot blast at Hamilton furnace p. 43.



Blowing engines of Hamilton blast furnace, p. 46.

even the adept in physical science, familiar though he be with the processes by which the forces of nature are made to serve the interests of man. A recent writer in The Electrical Engineer summarizes as follows the capabilities of acetylene gas:

Acetylene and its surprising transformations.

"Acetylene, on being passed through an iron tube heated to dull redness, goes rapidly and completely into benzine, without the formation of any other product. Benzine is a product of prime importance, and is the base of thousands of organic substances, known as the benzine series of compounds. If the resulting benzine vapour be passed into strong nitric acid, it is transformed into the oily nitro-benzine, and this on treatment with hydrochloric acid and iron filings goes easily into aniline. The ton of calcium carbide, or the 812 pounds of acetylene, results thus in somewhat less than 956 pounds of aniline. With the formation of aniline the road is now clear for the production of the innumerable dye substances whose varied hues have adorned the sisters and wives of the last twenty years, and whose discovery and preparation absorb the energies of an army of chemists. Instead of passing into the dye substances however we may transform our aniline into carbolic acid. Thence it is but a step to picric acid, the foundation substance of many modern explosives. Or, again, we may boil the aniline with acetic acid, and we have transformed it into acetanilide, or anti-febrin, the well-known fever specific. These substances, with their varied properties, come thus primarily from a lump of coal and a piece of lime. Our protean acetylene however is capable of undergoing other changes just as startling. For instance, if it be passed through a tube heated to bright redness, it is changed to naphthalene, and naphthalene again will pass into a multitude of other valuable products. Or again, starting with acetylene, by the action of nascent hydrogen we may change it into ethylene, and finally into ethane. Ethylene, on being boiled with sulphuric acid and water successively, passes into alcohol, which is absolutely necessary to the production of an enormous number of economic substances. Ethylene, on treatment with permanganate of potash, readily oxidizes, first into oxalic acid and then into formic acid. If the formic acid so obtained be treated with ammonia, and the resulting product heated to 180° C, it is transformed into the deadly prussic acid. Acetylene in the mere presence of salts of mercury unites readily with the elements of water to form aldehyde, so much used today in the production of essences and the manufacture of mirrors. Starting with acetylene, by the agency of such cheap commercial products as muriatic acid, sulphuric acid, potash, ammonia and a few others, it is possible to build up whole systems of dyes, medicines, essences, perfumes, poisons and explosives. The methods by which this may be accomplished are known matters of pure chemistry. They become commercially and economically practicable with the cheap synthesis of acetylene." [4]

Economic production of acetylene.

This is an account of what is possible, rather than of what is immediately attainable. The keystone to the usefulness of acetylene is its economic production. In view of the many and important ends which it is capable of

[4] Article by R. K. Duncan, quoted in Industries and Iron, 30th August, 1895, p. 163.

serving, the manufacture of calcium carbide at a cost sufficiently low to permit of its being utilized in a commercial way is a matter of first-rate interest. The expense of producing the article has been a matter of much discussion, and on this point really hinges, for the present at any rate, the prospect of its speedy employment either in the production of light or of substances useful in the arts.

The principal, if not the only, works for the manufacture of carbide on the continent of Europe are situated at Neuhausen, in Switzerland, and it is stated that the cost of production there is $3\frac{1}{2}$ cents per pound, or $70 per ton of 2,000 pounds.[5] At the Falls of Foyers, in the Highlands of Scotland, a cascade whose beauties have been immortalized by the genius of Burns, calcium carbide is now being produced on a commercial scale under Mr. T. L. Willson's patents. In America the pioneer place of manufacture is Spray, North Carolina, where works were erected to test the practicability of the Willson method.

COST OF PRODUCTION.

Widely differing estimates of the cost of production at Spray have at various times been put forward, and it has been contended by some that the expense involved was so great as to preclude the possibility of making use of the carbide for practical purposes. An interesting contribution to the information on this point was made by a report in Progressive Age, a journal published at New York and devoted to the interests of gas, electricity and water. In March of the present year a commission, composed of Dr. Edwin J. Houston, of electric lighting fame, Dr. A. E Kennelly, an electric engineer, and Dr. L. P. Kinnicutt, chief of the department of chemistry at the Worcester Polytechnic Institute, was sent by the proprietors of the periodical above named to examine and report upon the process of manufacturing the carbide carried on at Spray. As this process is practically the one adopted in the production of carbide by the Willson method elsewhere since the construction of the plant at Spray, it is deemed advisable to condense the description given by the commissioners in their report (April 15, 1896), and to state their conclusions as to the cost of manufacture, as follows :

The experimental works at Spray, N.C.

The plant.

The plant consists essentially of a pair of electric furnaces for producing the carbide, electric generators for supplying the current, a turbine for driving the electric generators, and suitable apparatus for pulverizing and mixing the coke and lime required to charge the furnace. The power is furnished by a horizontal twin Leffel turbine wheel 30 inches in diameter, rated as capable, under 28 feet fall, of producing 300 horse power at 206 revolutions per minute and three-quarters gate opening. The water wheel is belted directly by tandem belts to two Thomson-Houston alternators, capable of generating a current of 240 kilowatts, or 321.8 horse power. There are two open electric furnaces placed side by side, each having a floor space of 3 feet by 2 feet 6 inches, and a height of about 8 feet. At the base of these is a

[5] Communication in Engineering and Mining News (New York), January 11, 1896, p. 35.

heavy iron plate supporting two carbon plates, one in each furnace, which in connection with the iron bed plate form the lower electrodes. The upper electrode for each furnace is a heavy carbon block 12 by 8 inches in cross section and 36 inches long, protected by a casing of sheet iron. It is clamped vertically in a metal holder supported by a vertical copper rod, passing through the roof of the furnace and connecting over a pulley with a hand wheel operated by an attendant.

Raw materials and the process of conversion in the furnace.

The raw materials, lime and coke, are crushed, ground and thoroughly mixed, the theoretical proportions being 60.87 by weight of lime and 39.13 per cent of carbon. They are taken from the mixer to the furnace, and the charge is started by throwing in a few shovelfuls upon the furnace floor, and establishing the arc through it between the upper and lower electrodes. At first the pressure and current at the furnace terminals are very irregular, but after the first quarter of an hour they become moderately steady, at about 1,600 amperes and 100 volts respectively. Under the action of the arc, which is usually about three inches long, the mixture immediately under the surface of the upper electrode is gradually converted into molten calcium carbide. The carbide tends to fill up the space between the electrodes, so that the upper electrode has to be raised to maintain the arc, thus allowing the new mixture to fall in from the sides. Fresh mixture is shovelled into the furnaces from time to time. Flames of ignited carbonic oxide, colored by the volatilization of calcium, rise from the surface round the upper electrode, but are smothered as far as possible by stoking and packing. The switchboard attendant continues to raise the upper carbon electrode by hand wheel, screw and chain, according to the indications of the voltmeters and ammeters, until the electrode has been lifted through its full range of about 30 inches. The addition of new mixture is then stopped, and the current is maintained until the last portions added have been sufficiently acted upon. The current is then cut off and directed into the neighboring furnace, which is operated while the first cools down sufficiently to permit of the withdrawal of the carbide in the solid form. The mass of carbide has roughly the form of a vertical prism of rectangular cross section, slightly tapering towards the top. Its surface is coated with a slag containing carbon, calcium oxide, calcium carbonate and calcium carbide. Below this surface is the mass of carbide, which remains fluid in its interior for many hours after the cessation of the electric current. In the two experimental runs made by the commissioners, the slag constituted about 5 per cent. in weight of the gross product, leaving the net result about ninety-five per cent. of the whole. The quantity of mixture unconverted into carbide varies from 50 to 75 per cent. of the charge. This is removed, and can be employed in the next charge.

Cost and capacity of the plant, and cost of producing carbide.

The works at Spray are experimental in their character, and are not adapted to the production of calcium carbide on the most economical scale. The cost of the plant is given at about $11,955, of which $6,000 is for the electric machinery. The capacity of the works is 2,000 pounds gross carbide in

one day of twenty-four hours, and the cost of production is estimated at $32.767 per ton, made up as follows:

Materials per day and per ton of gross carbide	$14.39
Labor " " "	11.00
Water power, 1,129$\frac{4}{5}\frac{5}{5}$	3.37
Petty stores, waste etc., $150 per annum	0.41
Taxes at $100 per annum	0.274
Interest on investment at 5 per cent., $11,955	1.638
Depreciation and repairs:	
Five per cent. on electric plant and turbine	1.218
Six per cent. on countershafting, building, rolls and crusher	.446
Twenty per cent. on furnaces	.021
	$32.767

Cost for water-power.

The cost of the waterpower is put at the low figure of $5 per horse-power year at the turbine shaft. Taking the efficiency of the alternators as 88 per cent., and of the transformers as 95 per cent., the net efficiency of the electric plant is 83.6 per cent., making the cost of the electric horse-power at the furnace terminals $5.98. The mean power employed at the switchboard being 203.2 horse-power, that generated at the turbine shaft is 230.9 horse-power. Adding for the power supplied to crusher, mixer and shafting, 15 horse-power, the total power at the turbine shaft is 245.9 horse-power, for which the annual cost is $1,229.50.

Cost of materials.

Coke from the Pocahontas mines, Virginia, costs $1.50 per ton f. o. b., and delivered $4.55 per ton. Lime, also from Virginia, costs about $1.75 per ton f. o. b.; delivered, $6.30 per ton. About 2,250 pounds of coke and 2,670 pounds of lime are required for a ton (2,000 pounds) of gross carbide. Carbon for electrodes costs six cents per pound.

Yield of gas in the carbide.

The net carbide in the tests made by Messrs. Houston, Kennelly and Kinnicutt yielded an average of 4.926 cubic feet, and the gross carbide an average of 4.696 feet of moist acetylene gas per pound. As the theoretical product of one pound of calcium carbide in moist acetylene gas is approximately six cubic feet, the net carbide yielded only 82.1 per cent., and the gross carbide 78.26 per cent. of the possible product. The gas however was practically pure.

Estimated cost of calcium carbide under ideal conditions.

In a supplementary report Messrs. Houston and Kennelly estimate that in a perfect electric furnace under ideal working conditions, and on the assumption that coke can be laid down at $2.75 per ton and lime at $2.50 per ton, and that water power can be procured at $5 per horse-power per year, the cost of calcium carbide would be $8.734 per short ton. Owing to impurity of materials, departure from perfection in plant, etc., at the Spray works, the actual cost of material and power at the foregoing values, irrespective of electrode carbons, labor, depreciation, interest and other fixed charges, was $14.97 per short gross ton. Under favorable circumstances, such as they believe can be realized in particular localities, the total cost per short gross ton in a plant whose daily output is five tons might be $20.

PLANTS IN NEW YORK STATE AND MICHIGAN.

Plant at Niagara Falls, N.Y.

Plants for production of the carbide in America have been put up at Niagara Falls, N.Y., and at Lockport in the same State. At the former place the Acetylene Light, Heat and Power Company of Philadelphia have built a factory on the bank of the Niagara river, and the power required in the process of manufacture is obtained through the Niagara Falls Power Company from the great falls themselves. Four electric furnaces have a capacity of five tons of calcium carbide per day, and have been turning out this quantity since about the middle of July, 1896. The lime is obtained from Port Colborne, Ontario, where are situated John Reeb's kilns, using natural gas for fuel, and also from the American side of the river. The coke comes from Pennsylvania. The process of manufacture does not differ in principle from that already described, but cast-iron crucibles are used to contain the charge in the furnace. These are saved from fusion by the charge itself, which receives the heat of the electric arc and which constitutes an excellent non-conductor. The product is all marketed in Philadelphia, where it is used wholly for lighting purposes. In the office of the company, lighted by acetylene, is a generator for converting the carbide into gas, called Napheey's Automatic Gas Generator, which appears well adapted for the purpose. It occupies little space, costs but a small sum, and entails almost no expense for attendance or maintenance beyond supplying it from time to time with the necessary water and carbide. Water is admitted to the chamber containing the carbide, and acetylene gas is immediately given off. When this has acquired a certain volume, it begins to force the water out of the chamber into a receptacle above, and the production of gas ceases. Upon the pressure of gas being lowered by its consumption, the water again makes its entrance and comes in contact with the carbide, and fresh gas is generated. In this way the production of gas is governed automatically by the quantity used. It is stated that this small piece of apparatus, costing perhaps $200, will take the place and do the work of an electric lighting plant valued at about $8,000. One such generator is capable of producing gas sufficient to light a large hotel or office building.

Plant at Sault Ste. Marie.

Works are also under way at the present time at Sault Ste. Marie, Michigan, for the manufacture of carbide to be supplied to the Chicago Gas Company. The elecric current will be generated on the Canadian side by the Lake Superior Power Company, which controls the immense water power afforded by the steep descent of the St. Mary river, the outlet of Lake Superior, and will be conducted across the river by a wire or cable.

PLANT AT MERRITTON, ON THE WELLAND CANAL.

Plant at Merritton, Ontario.

In Canada the manufacture of the article is in the hands of the inventor, Mr. T. L. Willson himself, who has already entered into the work of production with characteristic energy. In this Province, Mr. Willson contends, are combined the facilities for making calcium carbide unequalled elsewhere in America, or indeed in the world. Great water powers, by means of which the required energy can be cheaply produced, vast beds of limestone of

Facilities for economic production here.

excellent quality, easily converted into lime, and good shipping facilities both by rail and boat, are three of the indispensable elements necessary to the building up of a great trade in this article, and Ontario has them all. The fourth element, an abundant and cheap supply of carbon, is not present in so marked a degree, owing to the fact that there are no coal mines in Ontario; yet the distance from the coke regions of Pennsylvania is not so great as to unduly enhance the cost of coke, upon which there is no import duty and which can be laid down as cheaply at Ontario points as at other places equally distant from the coal fields, which yet do not offer the other advantages to anything like the same extent. It is true that coke is not the only form of carbon which can be used in the production of carbide of calcium.

Wood charcoal a raw material of good promise.

Wood charcoal would perhaps be even preferable, on account of its freedom from the impurities which are found in coal and coke, but so far its comparatively high price has rendered its use impracticable.

The vast amount of material annually going to waste in the sawmilling and other wooden industries of Ontario ought to afford an ample opportunity for the production of charcoal on an economic scale, especially by the distillation method, by means of which the bye-products, such as wood alcohol, tar, etc., are saved, and greatly reduce the cost of the process. The Rathbun Company of Deseronto have shown that it is both practical and profitable to do this, and other large manufacturers and sawmillers might with advantage take a leaf from their book.

The natural resources, waterpower and lime, and facilities of transport, are found in a peculiar degree in the Niagara peninsula of Ontario. Niagara Falls, being a railroad centre and distributing point, also offers facilities for delivery of coke at minimum cost, either there or at other places in the peninsula. The difference in level between the waters of lake Erie and lake Ontario makes available the enormous power latent in the falling of the whole surplus water of the great lake system through a distance of about 325 feet. At the cataract of Niagara the great leap given by this body of water impresses the beholder with the resistless energy it possesses. But the Falls are not more than 160 feet high, just about one-half the total descent, the remainder being made by the river, partly above and partly below the cataract. On the American side of the river the Niagara Falls Power Company has constructed a large and costly plant, by means of which about 100,000 horse power may be developed, or one-half the force which they may legally derive from the Falls. The same company has acquired the right to develop 200,000 horsepower on the Canadian side, at a rental of $25,000 a year, but so far no steps have been taken to give effect to their privileges. There is the same descent in the Welland canal as there is in the Niagara river, but it is accomplished in gentler stages.

Water power of the Niagara river and Welland canal.

Willson's plant on the old canal.

At Merritton, on the route of the old canal, Mr. T. L. Willson has acquired the power at locks Nos. 10, 9 and 8, giving a fall of 12 feet 8 inches, 12 feet 6 inches and 12 feet 2 inches respectively, and yielding a total of 1,650 horse power. Works are at this moment nearing completion for the

manufacture of calcium carbide.[6] Mr. Willson purchased a flour mill known as the Downie mill, which stood for many years at lock No. 10, on the east bank of the canal, and has adopted part of the milling machinery for the preliminary processes of treating the lime and coke. Both materials are required to be reduced to a fine powder, but the coke must be ground finer even than the lime. For the lime a "pot" crusher gives the first reduction, and about one-third of the material is brought by this operation at once to the necessary fineness, the remainder being sent on to a pair of millstones, where it is also ground sufficiently small. The coke is reduced by successive pairs of corrugated rolls of graduated fineness, from each of which the product passes through a "scalper" or "grader," which sifts out the particles brought down to the required size, and returns the coarser ones to the next pair of rolls, the final operation being performed by a pair of smooth rolls. The whole process of grinding the coke answers almost exactly to that of making flour by the roller method, and is performed on machinery designed for this work. The lime and coke, when sufficiently crushed, are elevated to bins, whence they are emptied into a weighing hopper, and mixed in the proportions of about 100 lb. of lime (anhydrous) to 60 lb. of coke. Below the weighing hopper is a revolving cylinder in which the materials are thoroughly and intimately mingled, after which the mixture is stored in bins ready to be conveyed to the furnace room. Here is a series of electric furnaces, constructed in pairs. Each furnace requires about 250 horsepower for its operation, a pair thus consuming about 500 horsepower when worked continuously. It has been found advantageous to run only one furnace of each pair at a time, so that when 250 horsepower is being used a pair of furnaces can be in constant operation alternately, time being required to withdraw a fused charge and introduce a new one. The furnaces are the same in principle as those at Spray already described, but with improvements in detail, and capable of reducing a greater proportion of the charge to calcium carbide. When the aggregate power of the three falls is utilized, there will be six sets of furnaces, requiring 1,500 horsepower, and capable of producing 7½ tons of calcium carbide in 24 hours.

In the furnace room.

The power plant consists of two Leffel twin horizontal turbine water wheels of the type known as the "Samson" at each fall, each wheel capable of generating 275 horsepower under 12 feet head with full gate and runn ng at 120 revolutions per minute. The turbines are immersed in a substantial wooden penstock behind massive masonry built to ensure the safety of the canal bank pierced for the water flumes, which are 18 feet wide and contain a depth of 7½ feet of water. The wheels are run separately, not in tandem. Each is connected by a belt 28 inches wide with a dynamo having a capacity of 75 volts and 2,500 amperes; consequently when the plant is complete there will be six water wheels each driving a dynamo, and furnishing a total of say 1,500 electrical horsepower.

The power plant.

[6] Just as this Report is going to press Mr. Willson writes under date of August 15th: "We successfully started up the work this morning and have been running at this moment of writing over four hours, producing carbide. Everything works splendidly for a new plant, and I am very much pleased to announce to you so successful an opening of what promises to become, in the future, Canada's greatest industry."

The current generated by the falls at locks number 9 and 8 will be conducted by wire to the furnaces in the present building, and by connecting the terminals the whole of the electric power can be evenly and automatically distributed among the furnaces just as it is required. The belts connecting the water wheels with the dynamos are of novel construction, being made of laced rawhide tanned in a manner to resist the action of water. They are manufactured in St. Catharines under the patents of Mr. Ellis, superintendent of the Riordan paper mill.

Transportation facilities.

A spur of the Niagara Central Railway runs to the door of the factory, giving good facilities for bringing in the raw materials and shipping the finished product.

Relative values of coal gas and acetylene considered.

Mr. Willson, naturally enough, is an enthusiast on the subject of calcium carbide, and foresees an unlimited demand and a future of immense importance for it. A pound of the carbide will yield about 5 cubic feet of acetylene; consequently a ton will give off 10,000 feet. The illuminating power of acetylene being say 14 times as great as that of either Hamilton or Toronto gas, the product of a ton of the carbide is equal to 140,000 cubic feet of the gas produced in either of these cities. In Toronto the price of gas is now 90 cents per 1,000 feet, so that calcium carbide at $80 per ton is equal to gas at 57 cents per 1,000 feet. But Mr. Willson contends that the diffusive power of acetylene is much greater than is shown by the photometer, and that in practice a much less quantity is required than the theoretical equivalent, consequently the actual cost of the acetylene would be still smaller in comparison with that of gas. Arrangements are being made for a practical test of the merits of acetylene as an "enricher" of coal gas in the city mains of St. Catharines.

At the present stage of its development the illuminating properties of acetylene gas are engaging the attention of those interested in it almost exclusively, but the possibilities of its employment in synthetic chemistry in a commercial way will receive closer investigation when it has been a little longer in the market. Mr. Willson is advertising the carbide for sale at present for $80 a ton, ready barrelled for shipment, and at this figure he believes it absolutely certain to have a large local demand. The export trade to Europe will be a considerable feature of his business, and large contracts are offered him from Belgium and elsewhere. He confidently expects to be able to sell the carbide profitably in Europe at a lower cost than that at which the manufacturers there can produce it. For cooking and heating purposes also there is a wide field of usefulness open to this article so varied in its capabilities.

Export trade to Europe.

The inventor's confidence in calcium carbide.

Mr. Willson's faith in the future of calcium carbide and his faith in the advantages offered by Canada, especially by Ontario, for its manufacture are alike great. But it must be admitted that he is proving his faith by his works. He has undertaken the expenditure of a large sum of money in order to put his ideas into effect, and professes his willingness to extend his works and build new ones in order to keep abreast or even in advance of the demand. He asks no bonus, exemption from taxes, or special privileges of any kind. He

believes his business is a legitimate one, and one that will pay. A man who will invest his capital in developing the natural resources of the country is entitled to consideration, and the public in general will hope that Mr. Willson's reward will be commensurate with his energy and his pluck.

The Hamilton Blast Furnace.

The Hamilton Iron and Steel Company's furnace.

In accordance with the terms of the subsidy granted by the city of Hamilton, the iron smelting furnace erected by the Hamilton Iron and Steel Company was blown in at the close of 1895, although actual smelting operations were not commenced until several weeks later. The contract for the works was entered into by the Philadelphia Engineering Works, and although unlooked-for delays occurred in the undertaking, the terms of the agreement were faithfully carried out, and a plant complete in every one of its details is the result. It is in all respects a thoroughly good and substantial furnace, possesses all the modern improvements and is capable, when driven at its highest speed, of turning out 200 tons of pig iron per day, when using 60 per cent. ores and Connellsville coke. It is constructed to obtain the highest economy in consumption of fuel and in handling of materials. It is also furnished with blowing engines of the cross compound type, in order that the steam which the blast furnace generates may be used for other purposes besides those of the furnace itself, The blast is heated by three 19 by 60-foot firebrick hot blast stoves of the Gordon-Cowper-Whitwell patents, which have proven elsewhere to be not only eminently satisfactory, but very durable. The casing and valves of these stoves are suitable for a working pressure of 20 lb. per square inch, and all the furnace construction, as well as the piping, are made suitable for this pressure; for, although it is not expected that so high a pressure will be used in practice, experience has shown that substantial work is the only thing suitable for continued driving, according to the American idea of pig iron production. In accordance with the contract, the foundations of the furnace, cast house, boilers and boiler house, stoves and hoist tower, engines and engine house, stock house, pumps and water column, are of the most suitable material, principally limestone. Upon these foundations are constructed :

Contract for the works.

The plant.

One blast furnace, 16 feet in the bosh and 75 feet high.
One wrought iron hoist tower.
Three firebrick hot blast stoves, 19 feet in diameter and 60 feet high.
One pair of cross compound condensing blowing engines, steam cylinders 42 by 60 inches, stroke 60 inches, with independent condensing machinery, feed water heater, boiler feed pumps, circulating pumps, etc.
One engine house, 42 feet 6 inches by 47 feet 6 inches inside, 28 feet to the square.
One stock house, 82 by 233 feet to centres of posts.
One cast house, 50 by 160 feet.
Twelve boilers, 59 inches in diameter, 24 feet long, with five 12-inch flues.
One boiler house, 50 by 118 feet.
One draught stack for boilers, 75 inches in the clear diameter by 125 feet high.

Specifications.

Connecting these several parts there is the usual piping, consisting of the hot blast main and connections, gas main to the stoves and boilers, and cold blast main from engines to stoves, all constructed to the following specifications :

Sole plate and columns.

The sole plate of the furnace is 26 inches wide and each segment tapers from $2\frac{3}{4}$ inches to 4 inches in the center, entirely surrounding the furnace, there being seven segments and a column in the center of each. The barrel of the columns is 18 inches at the bottom, tapering to 16 inches at the top and has an average thickness of $1\frac{1}{2}$ inches, the total height being 18 feet 7 inches.

Mantel plate.

The mantel plate consists of two 15-inch I beams of heavy section, well braced together with separators of approved form. On top of these is riveted a cover plate $\frac{1}{2}$-inch thick, on each edge of which is riveted a 4 by 4-inch angle iron.

Shell.

The furnace casing is 21 feet in diameter at the bottom and 18 to 19 feet at the top. The first ring is $\frac{5}{8}$-inch, the second and third rings $\frac{3}{8}$-inch, and the rest $\frac{5}{16}$-inch thick. The entire shell is double riveted in the perpendicular seams to secure the strongest joints of this form, and the horizontal joints are single riveted.

Platform and bridge.

The platform and bridge are composed of $\frac{5}{16}$-inch plate iron, butt-strapped and riveted with countersink rivets, the straps being underneath to present a smooth surface for rolling the barrows. Around this platform is a 42-inch guard rail $\frac{5}{32}$-inch thick, stiffened with a 2-inch angle iron and braced on the straight sides leading to the hoist tower. The extending platform is secured to the shell of the furnace by a 3 by 3-inch angle iron, and the guard to the platform by a 2-inch angle iron. The bridge is supported by three 15-inch I beams, 150 lb. section.

Bell and hopper.

The bell is 8 feet 4 inches in diameter, $1\frac{3}{8}$ inches thick in the body by $2\frac{3}{8}$ inches at the edge, swung by two links $1\frac{1}{2}$ by 6 inches from the 15-inch I beam, and operated by a 12-inch steam cylinder arranged with steam cushion, both top and bottom, to prevent jarring in case of careless handling. The bell sets against a lip-ring 18 inches deep, of the same thickness as the bell. The hopper is 11 feet 6 inches in diameter and 3 feet deep, made in segments, resting upon a hopper ring $16\frac{1}{2}$ inches wide, with an average thickness of 2 inches. This hopper ring is carried by a series of brackets riveted to the furnace shell, with four surfaces planed upon it to which are bolted four uprights carrying two 10-inch cross beams, and to these are bolted the bearings for the lever beam carrying the bell. To the lever is attached the cross-head of the 12-inch oscillating steam cylinder and the counterweight box, which latter is secured by two rods $1\frac{1}{4}$ by 4 inches.

Down-comer.

The down-comer is 60 inches in diameter and $1\frac{1}{4}$ inches thick.

Bleeder.

The bleeder, a pipe through which surplus gas may escape, is 24 inches in diameter and 20 feet high.

Dust-catcher.

The dust-catcher is 12 feet long and 11 feet high, below which is the hopper bottom. It is provided with ladder and doors.

The bustle pipe (the pipe around the base of the furnace for conveying gas to the tuyeres) is 35 inches in diameter and about 25 feet across from centre to centre, constructed of $\frac{1}{4}$-inch soft steel, closely riveted and caulked and swung by seven 2-inch bolts from cast brackets riveted to the furnace casing. To this bustle is riveted six tuyere pipes of the Gordon patent, with ball joints.

The tuyere pipes are 8 inches in clear diameter after lining. Six bronze tuyeres are inserted in six bronze coolers, the tuyere nozzles being of 6 inches diameter. Tuyere pipes.

The feed water pipe is 7 inches in diameter, and the waste water trough 11 by 12 inches. Water pipe.

There are five bosh bands below the mantel, each 8 inches by 1 inch, with two drawbolts at each joint $2\frac{1}{2}$ inches in diameter. Bosh bands.

The hearth jacket is of steel joined by draw joints, with heavy bolts and washers; it is 6 feet 4 inches high, 16 feet diameter and 1 inch thick, and to it is bolted a dry notch through which pass two cinder arches where it is reinforced. The cinder arches are of bronze, with bronze notch and fitted with iron pipe. An outside jacket forming a trough extends around the furnace inside of the base plate, 2 feet 6 inches high, $\frac{1}{2}$ inch thick and about 17 feet 6 inches in diameter. The brick work of the furnace commences at the bottom with four courses of 12-inch brick. The hearth is 16 feet in diameter, 10 feet inside and 4 feet 4 inches high. From this point the wall is 27 inches thick throughout the entire boshes, built of a good quality of firebrick; and all the water fittings are of brass Hearth.

The hoist is equipped with double wire ropes of 1 inch, with 12 by 12-inch cylinders, cages 7 feet 6 inchs by 9 feet and an automatic safety device with wooden guides. The engine house at the foot of the tower is of brick, 10 feet 11 inches by 12 feet 5 inches, while the tower itself is constructed of six columns 108 feet long, each composed of 2 by 8-inch channels, the base of which is a sole plate resting on stone foundations. The roof is of substantial angle iron pieces, covered with No. 20 corrugated iron. A 3-foot overhang, with wooden flooring, is arranged where the men receive the buggies and push from them without the least delay. Hoist.

The hot blast stoves are three in number, of the Gordon-Cowper-Whitewell pattern, with 19 feet diameter of casing and height from bottom to top of 60 feet. The shell is of plate iron $\frac{5}{16}$-inch thick. The top is conical in shape and is constructed of plate steel $\frac{3}{8}$-inch thick. Above the conical top is a chimney casing 40 feet high, the base being of plate iron $51\frac{3}{8}$ inches in diameter. The chimney valve is erected on this base, with a clear diameter of 36 inches, and the casing above it is 42 inches diameter, of iron plate $\frac{1}{4}$ inch thick gradually thinning to at the top. A circular platform 24 inches wide is fastened to the top of each stove, the flooring plates being of cast iron supported upon angle irons secured to the top casing of the stoves. A hand rail of $1\frac{1}{2}$ by $1\frac{1}{2}$-inch angle iron that is supported with 2 by 2-inch angle iron uprights or bannisters forms part of the platform. The operators may readily pass from one platform to another at the sections where they touch. The cold blast valve is of the Gate type and is 24 inches in diameter, the body being $\frac{3}{4}$-inch thick and the flanges 1 inch. It is provided with a pilot relief valve and is operated with rake and pinions. The hot blast valve connections have a casing 40 inches in diameter of plate iron $\frac{1}{4}$-inch thick and attached to the stove casing with a flanged branch of $\frac{5}{8}$-inch steel. It is of the same type and size as the cold blast valve. The body is of cast iron $1\frac{1}{4}$-inch thick, bolted between a pair of heavy cast iron flanges. The gas valve is a plate of cast Stoves and valves.

iron 2½ inches thick, planed up true and operated back and forth by means of a rake and pinion in a horizontal direction between the two flanged parts of the body. The valve is always in view so it may be kept clean ; if through carelessness it should leak the hot blast cannot enter the gas flues, but will pass directly into the atmosphere. The air valves are 18 inches in diameter in the clear, and are bolted to the hot blast valve casing branch. The chimney valve is also of the Gate type, 36-inch diameter in the clear and made of plate iron. The arrangement of the valve and seat is such that the draft of the chimney secures the passage of a strong current of cool air through them, which gives ample protection against the heated gases. A ladder extends from the ground level to the top of the stove casing, and is securely fastened to the shell. The bottom cleaning doors, one for each stove, are 20 inches diameter in the clear. On the conical top are six doors, each 16 by 20 inches. The walls of the combustion chamber are curved, the wall next the casing being 22½ inches thick, and the one between the chamber and first down pass 18 inches thick. The inner 13½-inch wall is built independent, or without bond, so permitting this part to be exposed. It is laid with extra No. 1 fire brick, and bonded every fourth course. The checker work or filling in the down passes is built on lintels forming 9 by 9-inch square flues, with division walls of fire brick. The chimneys are lined to a clear diameter of 36 inches with No. 2 fire brick.

Gas main.

From the dust catcher in the blast furnace a 40-inch gas main extends across to the face of the stoves, and from this are down pipes 30 inches in diameter, terminating with balanced conical explosion and cleaning doors. These 30-inch pipes serve as a support and cleaning arrangement and safety attachment for this portion of the gas connections. The 40-inch main and 30-inch gas pipes are made of iron, riveted and fitted, and lined with firebrick throughout. From the 30-inch gas mains an 18-inch gas connection provided with expansion and ball joints extends to each stove, joined to the valves. From the dust catcher a down pipe carries the gas into an underground flue, and thence the gas is conveyed through the flue across the face of the boilers. From the flue the burners for the boilers receive their gas, and through them it is supplied as fuel to the several boilers for generating steam. The hot blast main commences with the cast iron flange upon the hot blast valve, to which are riveted three branches 40 inches in diameter. Across the top of these, and riveted to them, extends a 40-inch hot blast main about 60 feet long, which terminates at each end with a cast iron flange. To this is riveted and attached with a gusset, to permit of free movement of air, another 40-inch main which extends to and is riveted to another gusset and to the 33-inch bustle pipe surrounding the furnace. The connection of this 33-inch pipe to the 40-inch pipe is so spread as to give it the same arc as the 40-inch pipe. Upon this is riveted a 10-inch automatic gas escape valve, and also a cold air direct branch which is provided with cut-off and automatic valves and attached to the cold blast valve. The whole of the main is lined with firebrick to a clear diameter of 24 inches. It is supported at convenient intervals with iron uprights.

A cold blast main is attached to each of the engines, commencing with a 24-inch cold blast valve, the sealing of which is practically tight against pressure either way. To the valve is bolted a flange riveted to a 24-inch upright pipe or branch to the horizontal main. This main crosses the engines and extends to the stoves, practically horizontal. To it is riveted an upright branch, and this to a horizontal branch crossing the top of the stoves. To this horizontal branch on top of the stoves are riveted three branches, which with their cast-iron flanges are bolted to the cold blast valves of the stoves. To the three ends of this pipe and at sundry points within it are riveted flanges, and upon these three ends blank flanges are bolted. Within the horizontal pipe is bolted a 24-inch cut-off valve, and upon it is riveted a 10-inch safety valve. This entire cold blast main is made of plate iron $\frac{5}{16}$-inch closely riveted and caulked throughout. Each connection, whether from the engine or the stoves or from one part of the pipe to another, where square bends occur, is provided with a gusset to ease the flow of air and give it practically the effect of a round elbow. Cold blast main.

The boiler plant consists of twelve boilers, each shell 59 inches in diameter and 24 feet long, each containing five 12-inch lap-welded tubes, and across each pair of boilers is a 30-inch by 9-foot steam drum connected with two 12-inch legs 3 inches long. Each pair of boilers constitutes a battery, and two boilers are in one setting of brick-work so that they may be thrown out while the others are in use. One firing arrangement is provided for each pair. The gas is conducted to each boiler through a 10 by 16-inch Gordon patent burner to one side of the front. Upon the foundation is placed a cast-iron fire front, supplied with firing and ash-hole doors, so that coal or other fuel may be used instead of gas. The side and walls are of brick-work 18 inches thick, half firebrick and half red, half-way back beyond which the firebrick is reduced to $4\frac{1}{2}$ inches; the same thickness of firebrick is in the central wall, but the total thickness is $22\frac{1}{2}$ inches. The gas combustion chamber is entirely of fire brick, and so are the grate walls and the back wall, retained by angle irons from front to back, and across the back of the setting, and each in turn by three sets of brick stays set in cast-iron sole plates extending to and locked into the inside of the foundation. The upper end is held by bolts extending across the battery. To blow off the flues a 3 inch pipe connection is made with the horizontal main steam pipe and provided with a valve. From this it reaches to and connects with the 3-inch pipe extending across the whole twelve boilers, and from this pipe connects with a 5-way blower. This blower has 1-inch nozzles pointing directly into the centre of each flue, so that by opening the connections at the main steam pipes each of the boilers may be successfully blown, the dust passing through into the tight breeching and thence into the chimney. Boiler plant

The cast house is 50 by 160 feet, measured from the centre of the furnace to the centre of the end wall, besides which it surrounds the furnace in octagonal form. The walls have arched openings of various sizes, each supplied with cast-iron hinge plates, upon which the doors may swing or be taken off according to the requirements of the weather. The walls are Cast house.

22 feet high to the square and 13 inches thick. The roof is a heavy truss framing, covered with corrugated iron.

Chimney.

The chimney is 75 inches in clear diameter and 125 feet from the top of the foundation, and is lined its entire height with firebrick.

Feed pumps.

To feed the boilers two duplex steam plunge pumps are provided, steam cylinders 8 inches, water plunger 5 inches, stroke 10 inches. They receive water from the hot well and discharge it through a heater situated in the exhaust pipe of the condenser. The heater is 1,500 h.p., containing 500 square feet of heating surface, of solid drawn brass piping, the bursting strength of which is 1,400 lb. per square inch. From this heater the water is led to the main feed pipe of the boilers.

Circulating pumps.

For circulating the water required for the plant there are provided two duplex pumps with 14-inch steam cylinders, 14-inch water cylinders and 15-inch stroke. These pumps receive water from the lake by a main cast-iron pipe, and discharge into a stand-pipe 12 feet in diameter and 60 feet high, from which it is distributed through pipes to the furnace and cast house, as well as to hose for fire protection to the different parts of the plant.

Engine.

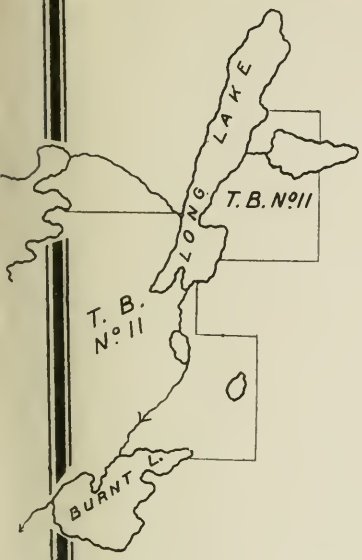
The engine is of the cross compound condensing Corliss type, with steam cylinders 42 by 72 inches in diameter, and two 84-inch blowing cylinders, one being placed in tandem to each cylinder and having a stroke of 60 inches. The fly wheel is 24 feet in diameter, built in ten segments and bolted to a box from the centre. The total weight of the wheel is 100,000 lb. These engines, together with the condensing apparatus, heaters, feed pumps and circulating pumps, are situated in an engine house 47 by 65 by 18 feet in the clear, built of brick 13-inch walls. The blowing capacity of the engines is 30,000 cubic feet per minute to a pressure of 15 lb. above the atmosphere.

First run of the furnace.

The first run of metal from this furnace was made in the presence of a large number of visitors from Hamilton and Toronto, on the 5th day of February of this year, the ore smelted being a mixture of hematite and magnetite from mines in the county of Hastings, and some hematite from a mine near Rochester, N. Y. A part of the first pig of this first run has been placed in the collection of the Bureau of Mines in the Parliament Buildings, where it will be preserved as a memento of the opening ceremonies of the Hamilton furnace.

Officers of th Company.

The Company has an authorized capital of $1,500,000, and the amount of stock taken up at the date of the first production of pig metal was $340,000. The officers of the Company are: President, John H. Tilden; vice-president, John Milne; secretary-treasurer, Robert Hobson; directors, A. T Wood, M.P., William Southam, Cyrus A. Birge, R. R. Morgan, George Hope and Æmilius Jarvis.


LONG LAKE
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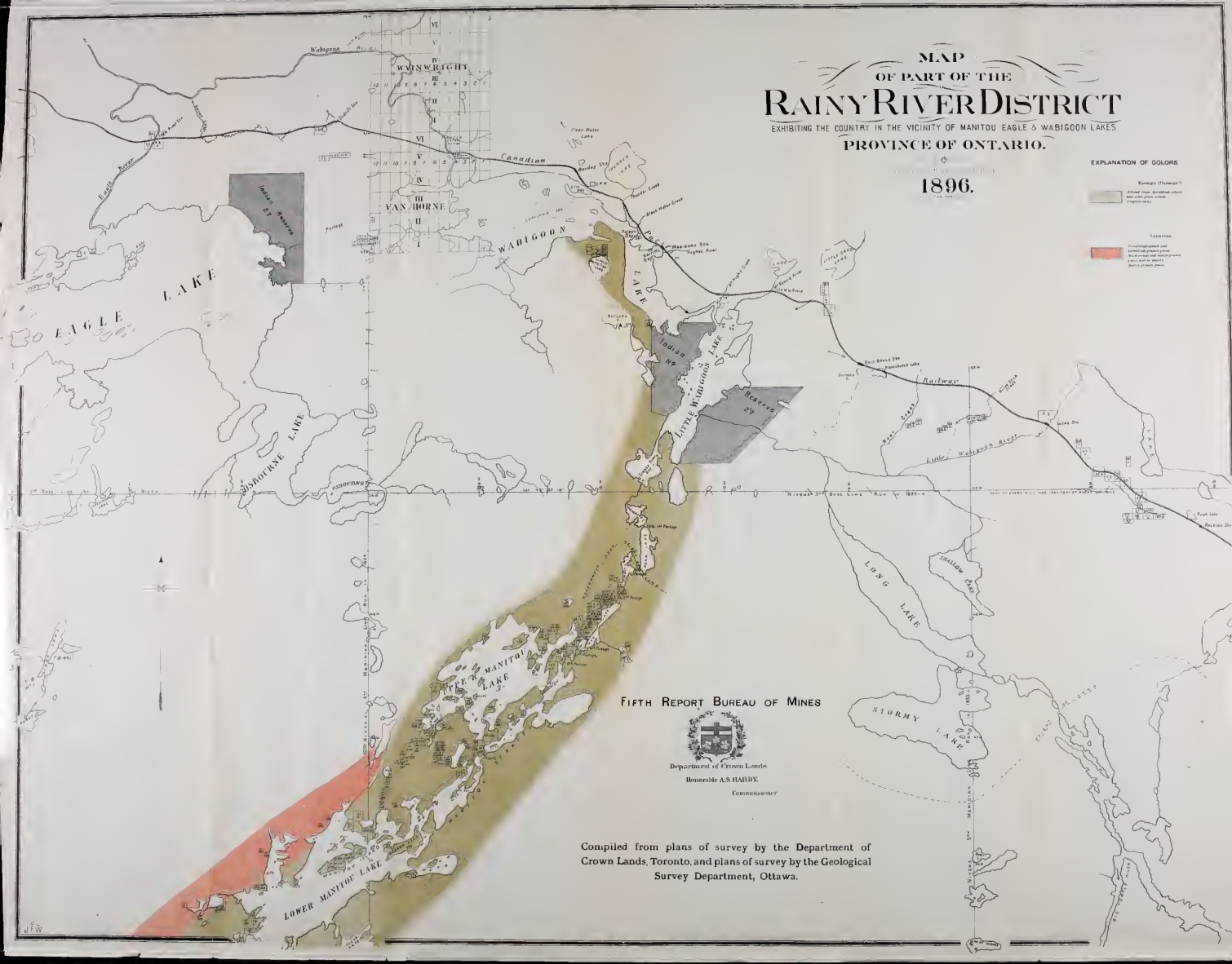
T. B. No 11
BURNT L.


MAP
OF PART OF THE
RAINY RIVER DISTRICT
EXHIBITING THE COUNTRY IN THE VICINITY OF MANITOU EAGLE & WABIGOON LAKES
PROVINCE OF ONTARIO.
1896.
EXPLANATION OF COLORS.
WAINWRIGHT
VAN HORNE
WABIGOON
EAGLE LAKE
OSBOURNE LAKE
LITTLE WABIGOON LAKE
LONG LAKE
STORMY LAKE
UPPER MANITOU LAKE
LOWER MANITOU LAKE
Indian Reserve 27
Railway
Canadian
Wabigoon River
Little Wabigoon River
FIFTH REPORT BUREAU OF MINES
Department of Crown Lands
Honorable A.S HARDY.
Commissioner
Compiled from plans of survey by the Department of Crown Lands, Toronto, and plans of survey by the Geological Survey Department, Ottawa.

SECTION II.

SECOND REPORT ON THE GOLD FIELDS OF WESTERN ONTARIO.

By Dr. A. P. Coleman, Geologist and Mineralogist of the Bureau.

Completing the outfit for the season's work.

Following the instructions of Mr. Archibald Blue, Director of the Bureau of Mines, the work of examining and reporting upon the gold fields of western Ontario, begun in 1894, was continued during the summer of 1895. Mr. Edward Burwash, B. A., was appointed geological assistant, and performed his duties diligently and with intelligence. Leaving Toronto on the 20th of June, the party reached Rat Portage on the 23rd, and proceeded to purchase the necessary supplies and to complete the equipment left in charge of Mr. William Margach, crown timber agent, at the close of the previous season. A third Peterboro' canoe was secured, as it had been found during the summer before that a bark canoe caused delay where rapid travel was desirable.

General outline of the regions examined and places visited

As the Lake of the Woods gold region had been visited and reported upon by Mr. Blue and the writer in previous years, it was deemed unnecessary to visit any of the mining camps near Rat Portage, but a short canoe trip was made to the newly discovered deposit on Bag bay, an arm of Shoal lake, near the boundary of Manitoba.

On June 30th the steamer Edna Brydges was taken for Fort Frances, where the outfit was completed, and two halfbreeds, Alexis and Nicol Mainville, were engaged as cook and canoeman respectively. They proved reliable and efficient. On the 3rd of July the party started north by Rainy lake to lake Manitou and lake Wabigoon; and on the 13th reached the Hudson Bay Company's post at Lonely lake, in Keewatin, just north of the boundary of Ontario, where a new find of gold had been reported in the newspapers.

On the 26th of July the party had returned to Fort Frances, and on the following day set out for Savanne by the Seine and Atik-okan rivers, visiting the Shoal lake and lake Harold mines on the way.

At Savanne the party was joined by Mr. Blue, and an expedition was made under the efficient guidance of Mr. James Hammond to the Huronian mine and other interesting points in Moss township; and afterwards to the Mattawin iron deposits near Finmark.

On the 23rd of August Mr. Blue and party set out for Fort Frances and Rat Portage by the Seine river, taking our canoes and halfbreeds; while we went to Fort William, and after a few days spent in visiting the Silver Islet mine and the McKellars' new gold discovery on Jackfish bay, returned to Toronto, which was reached on the last day of August.

During the summer more than a thousand miles of canoe travel were accomplished, and all the more important localities for gold in the part of

Ontario west of lake Superior were visited, with the exception of a few which had been examined the summer before.

Acknowledgements.

The writer desires to acknowledge the courtesy and assistance rendered by prospectors, miners and Hudson Bay officials during the summer. The names of Mr. Jabez Williams, who represents the Hudson Bay Company at Lonely lake; of that intelligent prospector, Mr. James Hammond, of Fort William; of the Messrs. McKellar, of the same town; of the Messrs. Wiley, of Port Arthur; and of the Rev. George Prewer, missionary at Wabigoon Tank, deserve especial mention.

Geological maps.

It is almost needless to say that the maps and reports of the Geological Survey of Canada have been made use of in all parts of the region which they covered, Dr. Lawson's work on the Lake of the Woods and Rainy lake and river being of special value. I wish to thank Dr. Dawson, Director of the Geological Survey, for his courtesy in providing advance sheets of the map now in preparation to illustrate Mr. McInnes's completion of Mr. Smith's work on the Seine river region. These maps have been of great service in preparing the portion of the present report refering to that region, and with the forthcoming sheets covering the rest of the territory known to be more or less auriferous will be of great value to explorers.

THE WESTERN ONTARIO GOLD FIELD.

Area covered by the summer's work.

The summer's work covered roughly the whole length of that part of Ontario lying between Finmark, near Thunder bay, and the Manitoba boundary; and also crossed the Province transversely between Minnesota on the southern shore of Rainy lake and Keewatin on the north shore of Lonely lake; about two hundred and seventy miles from east to west, and one hundred and fifty from south to north. In this way it was possible to get a somewhat comprehensive view of the region as a whole; but no attempt was made to work out the geology of the region generally, since work of that kind belongs properly to the Geological Survey of the Dominion.

Its geographical and topographical characteristics.

Geographically the whole region belongs to the Hudson bay drainage system; for, with the exception of lake Shebandowan and the Mattawin river, which empty into lake Superior, and so belong to the St. Lawrence system, all its waters flow more or less directly into Winnipeg river, which empties into the lake of the same name, and ultimately reaches Hudson bay by the way of Nelson river. By far the greater part of the region traversed belongs to the "rocky lake country," only a minor portion of the surface being covered with alluvial soil. A relatively large part is covered with water in the form of lakes without number and of all shapes and sizes, many of them apparently rock-rimmed basins and others evidently dammed by glacial deposits. Topographically the country may be described as an old peneplain, worked down by long erosion of weather and water to something approaching a level; then elevated and carved by running streams, and finally scoured in some places and loaded with debris in others, by the action of glaciers. It is a very difficult country to traverse except by canoe. In

fact, away from the railway, the Lake of the Woods, and Rainy lake and river, the canoe is the only practicable means of travel.

The Lake of the Woods is much the largest body of water in the region; Lonely lake, which is more than a hundred miles long, comes next; Rainy lake third; and after this a host of sheets of water ranging from lakes twenty-five or thirty miles long to the tiniest ponds. The land surface is often hilly, and often rises precipitously above the adjoining waters, forming rugged cliffs, but the greatest height attained does not exceed a few hundred feet, and no elevation occurs worthy of the name mountain.

Geology of the region.

The account of the general geology of the Rainy Lake region given in the Report of the Bureau of Mines for 1894,[1] taken from Dr. Andrew C. Lawson's excellent description of that district,[2] will apply as a whole to all the new districts visited, except that of the Mattawin iron deposits near Finmark. Gneiss, with associated granite or syenite, will be spoken of as Laurentian, even though it proves to have solidified later than the adjoining or overlying Huronian schists. The gray mica schists and gneisses of the Couchiching however have not been certainly recognized, and will scarcely be referred to. The green schists and associated eruptives, as well as the lighter-colored later sericite schists, with their accompanying quartz porphyries, described last year under Lawson's term Keewatin, are widely found and will usually be spoken of under the general term Huronian.

Visit to Bag Bay, Shoal Lake.

A new gold district west of Lake of the Woods.

Having engaged Mr. J. S. Whiting, an intelligent and enterprising prospector and steamboat pilot, as guide and canoeman, we left Rat Portage in two canoes on June 25th for Bag Bay, an arm of Shoal lake, ten or twelve miles east of the boundary of Manitoba, where a new gold location had been discovered. My object was to compare this most westerly and newest gold district of the Province with better known points farther east. The outward journey was made through the charmingly picturesque island scenery of Ptarmigan and Echo bays of the Lake of the Woods. Two portages led over into Clytie bay, an arm of Shoal lake, which opens into Bag bay. The general course is about west by southwest of Rat Portage, and the distance by the route followed about thirty-five miles.

As the geology of the region has been well described and mapped by Dr. Andrew C. Lawson, little need be said of the rocks observed by the way, chiefly green chloritic or brownish sericitic schists of the Keewatin. At the narrow entrance to Echo bay a four-foot seam of crystalline limestone containing some copper pyrites was observed in the sericitic schist. This is not very pure, containing some quartz, etc., but may at some time be of value for lime.

Bag bay gold location.

The Bag bay gold location lies on a small point on the southern side of the bay in an area mapped by Dr. Lawson as granite, and having a length of five or six with a breadth of three miles. The location is near the contact

[1] Page 45, etc. [2] Geol. Sur. Can., 1887, p. 22F, etc.
[3] Geology of the Lake of the Woods Region, Geol. Sur. Can. 1885, part CC.

with green Keewatin schist, and at the southwest end of the granite tract. Its discovery was made in a somewhat romantic way. An Indian crossing the portage from Helldiver bay, which lies a mile to the south, dropped his axe as he came down to the landing at Bag bay and thus knocked off some moss. Stooping to pick up the axe, he saw something glitter and picked up several specimens which he brought to Mr. Bunn, Hudson Bay officer at Rat Portage. The pieces brought in were brilliant gold specimens, and Mr. Bunn and Dr. Scovil of Rat Portage took up the location.

An auriferous vein in a granite tract.

The way in which the deposit was found is very suggestive of the difficulties of prospecting in this region, where so much of the rock surface is covered with moss. Doubtless many rich veins are still hidden away where least suspected.

At the time of our visit no development work had been done except stripping and the putting in of a few blasts, so that our examination was not very satisfactory. So far as could be seen the deposit consisted of a quartz vein about six feet wide, dipping nearly vertically between distinct walls, and having a strike of about southeast and northwest. It could be traced for nearly a hundred feet, i. e. as far as the stripping allowed, and appeared to sink at each end beneath the muddy soil of the swamp. The country rock is of granite, partly greenish gray, like that of the Shoal lake region of Seine river, partly flesh red. An account of thin sections prepared from this rock will be given in the part of this report devoted to petrography; but it may be noted here that many of the most brilliant gold discoveries made in the Lake of the Woods region during the last few years have occurred in granite areas near the contact of Keewatin schists, so that prospectors are beginning to search these contact zones with special care.

Though bush had been cut and thrown over the part of the vein that had been blasted, we had no difficulty in knocking off some fair specimens of quartz with free gold, and the young Swede who kept guard in a shanty close by showed us still richer ones, though not equal to the brilliant examples of gold in quartz and galena displayed by Messrs. Bunn and Scovil at Rat Portage.

The associated minerals were found to be iron and copper pyrites and galena. Much of the glaciated, *roches moutonnees* surface showed rusty quartz, but we had no means of determining whether the whole length of the vein is as rich as the spot where the blasting had been done.

Until the property has been much more completely developed it would be rash to give an opinion as to its value, but what we saw looked very promising. The quartz is crystalline in look and not of the cryptocrystalline, quartzitic type found at the Sultana mine.

At a point a mile north of Bunn and Scovill's location, near the entry of Bag bay, the same vein is said to crop out. Here we found rusty, cellular quartz with pyrites, galena, molybdenite and tourmaline, but saw no free gold; nor had enough stripping been done to make it clear whether there was a distinct vein or not.

Leaving Bag bay and going south round the peninsula which separates it from Shoal lake, we visited Helldiver bay where some quartz occurs near the contact of an eruptive rock, quartz porphyry, with green schist. The quartz or quartzite is in small veins not more than two feet wide, striking north and south, and does not seem highly mineralized; though dark quartzitic material near by is heavily charged with pyrrhotite and a little copper pyrites. It is not likely that these veins are connected with the auriferous one a mile to the north on Bag bay. Veins on Helldiver bay.

Soon after entering Helldiver bay we saw what appeared to be a camp, and paddling up found a recent grave, evidently that of a child, the most elaborate Indian grave which I have seen in Ontario. It was placed in the middle of a small clearing on a prominent point sloping towards the bay. The tallest spruce in the clearing had its lower branches trimmed off, leaving a conical top as a "lobstick," or beacon. Near the lobstick, in the midst of a little vegetable garden, there stood a sort of double tent, the inner, smaller one of red cotton. Round the foot of the second tent were all the appliances for the unknown voyage; the tiny toboggan, canoe and paddles, hatchet, bow and arrows, and bunch of birchbark and firewood with a box of matches, needed for the journey. Some colored pebbles and other trinkets were to amuse the little one in its loneliness. In front of the tent a flag pole was placed and every motion of the flag in the breeze set a little bell tinkling. Grave of an Indian child.

Our return journey followed in part a new route, Shoal lake narrows, Ash rapids and Ash bay into Ptarmigan bay. Ash rapids receive their name no doubt from the ash trees growing there; and indeed it was a surprise to find so rich a growth of deciduous trees so far north, a sort of island of leafy trees in the midst of the monotonous forest of conifers, poplar and birch. Besides ash we observed oak, basswood, thorn trees, choke cherries and wild plums near the rapids; but no evergreens. Not far from here, just within the entrance to Echo bay, there is a small patch of cactus, apparently of the same species as grows on Red Pine island in Rainy lake, Opuntia fragilis. These two spots are, so far as I am aware, the only localities where cactus grows in Ontario. Flora of Ash rapids. Another cactus locality

Our journey was made during the whitefish season, and we had plentiful opportunities to supply ourselves with fish, which seemed the most delicious I had ever tasted. Here and there along the shores or on islands one finds a shanty, reoccupied generally by a thrifty Scandinavian who fishes during the season, selling the product to companies which send around small steamers to collect the fish. At other times these hermits cut cordwood and cultivate a few acres of land in vegetables for the Rat Portage market. Whitefish.

The Manitou Region.

On June 29th we left Rat Portage for Fort Frances on the steamer Edna Brydges, and after a voyage south on the Lake of the Woods and east on Rainy river, reached Fort Frances early in the morning of Dominion day, having been delayed by the breaking of flanges of the screw on Rainy river. Rat Portage to Fort Frances.

The unavoidable delay in completing our equipment and securing two Indians, Alexis Mainville, who was with me the year before, and his brother Nicol, was partly employed in examining the stratified fossiliferous drift on the shore of the river just below the Hudson Bay post; but the results of this work will be made use of in describing the glacial and post-glacial deposits of the region.

From Rainy lake to Manitou lake.

On the 3rd of July we united with a surveying party and a number of prospectors who were going to the Manitou in chartering the small steamer Maple Leaf for the voyage to the Devil's cascade, where the portages leading from the northern arm of Rainy lake to lake Manitou begin. The previous year we had taken a circuitous route to the Manitou, via Despair, Clearwater and Pipestone lakes, so that I was anxious this time to traverse the most direct route between the two lakes.

A region of Laurentian gneiss.

From the beautiful Devil's cascade where the waters of the Manitou chain of lakes fall into the most northerly projection of Rainy lake, Manitou sound, to Cedar narrows just below Pickerel lake, the whole region is Laurentian gneiss, so far as observed, sometimes flesh red, sometimes gray, and barren of minerals. The waters traversed are clearer than those of Rainy lake, as one would expect from the character of the Manitou lakes themselves, and there is a romantic succession of short rapids or falls with intervening lakes and stretches of narrow weedy creeks. The portages are numerous, and some of them muskegy, but none of them long. The Manitou chain of lakes, begins on the south side of Pickerel lake, separated by only a short bit of current up which one can paddle, from the long southwestern extension of Lower Manitou. Then comes the large expanse of Lower Manitou with numerous islands at its upper end; followed by another narrow stretch, ending with Upper Manitou, which is really an archipelago. The prospectors of the region name the lower expansion "Big Manitou," and the Upper one "Little Manitou"; but the names given by the Crown Lands Department on the maps included in the Report of the Bureau of Mines for 1894 seem preferable, since the two main expansions of the lake are nearly equal in size. It might be better to give a distinct name to Upper or "Little" Manitou, since at most seasons there is a very considerable current flowing out of the narrow channel connecting it with the rest of the lake. Why the suggestive name of Manitou was given to this lake by the Indians, I have been unable to discover; but that some superstitious belief is responsible for it seems certain, for no Indians are seen on this beautiful chain of waters except parties making their way between Rainy lake and the rice beds of the Wabigoon.

The Manitou lakes.

The syenite area of Caribou lake.

Since the general geographical and geological features of the Manitou region were described in the previous volume of the Bureau of Mines Reports,[4] it will be unnecessary to say anything further regarding them here, except to mention that the Caribou lake syenitic area, found the previous summer, was re-examined and fresh specimens obtained, and a study of them makes it probable that the syenitic mass belongs to the so-called Laurentian rather than to the group of ordinary eruptive granites. This point will be further

[4] Vol. IV., p. 62, etc.

discussed in the petrographical portion of the report. The highest point of this syenite mass rises two hundred and thirty feet above lake Manitou.

Since our last visit to Manitou the region has attracted much attention from prospectors, and surveying parties have been kept busy laying off locations. Most of the recent finds have been in the country between the two expansions of the lake; and very rich specimens have been brought from there. The gold is not coarse and nuggety as in the Lake of the Woods region, but disseminated as fine specks, easily overlooked. The quartz often pans very well, and Mr. Floyd, assayer at Fort Frances, reports that some of the rock showing no nuggets assays $250 per ton.

Gold discoveries in the Manitou district.

No development work of any importance has been done up to the present, and we examined only such "prospects" as lay on our course. Lillin and Rochon's property near the entry of the Upper Manitou, on which some work was being done last summer, we found to be deserted. A claim on the same part of the lake owned by several Scandinavians contains a number of small bedded veins showing free gold.

The present mode of access by canoe in summer makes development very difficult. Whether one enters from Rainy lake or from Wabigoon, numerous portages make it impossible to bring in machinery. In winter however the new Wabigoon road gives better connection with the world by means of the Canadian Pacific Railway at lake Wabigoon.

The new Wabigoon road for winter travel.

Continuing our journey northwards, we started for Wabigoon by the route followed last year and found it much less difficult, since the water was higher. We were able to make the journey with only five portages, the third and longest being about three-quarters of a mile. The lake between the third and fourth portages appears to be on the divide; for Alexis Mainville, who is well acquainted with the region, says that it flows both ways. In that case the height of land should pass through the lake, instead of to the north as shown in last year's map of the Manitou region.

The route to Wabigoon.

A lake on the divide, whose waters flow north and south.

The winding river and great fields of rice leading to lake Wabigoon we found much more navigable this year than last, owing to the higher water.

Lake Wabigoon to Lonely Lake.

Rumors of the discovery of gold at Lonely lake, on the northern boundary of the Province of Ontario, made it a matter of interest to visit and report upon the prospects of that region as a gold country. As it turned out, the reports were exaggerated and in some respects quite incorrect; yet this journey, through a stretch of the Province hitherto almost undescribed geologically, proved to be of much interest.

Parts of the region have been traversed by members of the Geological Survey of Canada at several times, and brief references have been made to the lakes and their shores by Dr. Bell, Dr. Selwyn and Mr. Dowling. In 1872 Drs. Selwyn and Bell followed a canoe route from Lac des Mille Lacs, via Lonely lake to the Lake of the Woods; and in his report Dr. Bell gives the results of a track survey of Lake Minnietakie and the lakes and rivers

Early explorations by Selwyn and Bell.

between it and Lonely lake, and also of the western end of Lonely lake itself.[5] In 1886 he set out from Wabigoon for James bay, passing through lake Minnietakie and the eastern end of Lonely lake[6]; but adds little to his former description. In the summary report of the Geological Survey of Canada for 1893 there is a brief mention of Mr. Dowling's journey from Wabigoon to Lac Seul or Lonely lake, but no details of his observations are given, though we may expect they will be published before long.

The maps of the region which I have been able to obtain are very imperfect, and so far as I am aware the only map that has been published showing the route from Wabigoon to Lonely lake is the "Map of the Country between Lakes Superior and Winnipeg," Ottawa, 1884.

Portage from Wabigoon Tank to Sandy lake.

The best point of departure for Lonely lake is Wabigoon Tank, on the Canadian Pacific Railway. This may be reached from Little Wabigoon lake by paddling up Mackenzie river, which enters the lake from the northeast. The landing is a short distance from the railway. Wabigoon Tank is not a station, though trains stop there when signalled. The only white men living at the place are the Rev. George Prewer, Church of England missionary, and the Hudson Bay officer in charge of the store. From the landing on Mackenzie river there is a portage of nearly nine miles northeast to Sandy lake. The Hudson Bay Company have made a road across the portage, and freight is teamed over for the supply of various posts to the north, including Lonely and Sturgeon lakes. The road at the time we crossed was very muddy at first and very stony afterwards, so that the team employed could make only one journey to and fro in a day. This delayed us in crossing, and was specially uncomfortable since the neighborhood of the Hudson Bay post, removed as it is from any body of water larger than the half-choked Mackenzie creek, and with only a small clearing, is a favorite haunt for sand flies, black flies and mosquitoes.

Huronian schist.

The nearest rock to the post is found at a railway cutting a mile and a half east, where a hard, close-grained Huronian schist is exposed. Between the post and Sandy lake solid rock is found only once, about half way across the portage, and then rises as a hill of very contorted Huronian schist. The rest of the portage shows only drift materials, for the first four miles whitish silty clay with black loam covering it in the lower parts. This seems quite free from stones. Then two stony ridges are crossed, probably moraines.[7] The boulders are chiefly gneiss and granite, with a few green schists. Beyond this one finds clay again and sometimes sand, barren looking for the greater part, but covered with black loam in the bottoms.

The better portions of this region, so far as exposed at the portage, consist of good soil, having a rich growth of poplar and other deciduous trees, with some spruces. The more barren clays and sandy tracts are covered with small Banksian pine. The timber is all second growth. There must be a very considerable area of good land between Wabigoon and Sandy lakes,

[5] Geol. Sur. Can., 1872-3, pp. 101-103. [6] Ibid. 1886, pp. 7 and 8 G.
[7] Mr. Dowling mentions these moraines in the Summary Report for 1893, p. 17.

though the vegetable loam has been burnt off at some points, thus depriving the surface soil of its most useful ingredients.

There is an old canoe route between Wabigoon and Sandy lake, making use of two small intervening lakes, but the portages are so grown up, according to report, as to make the long portage preferable.

Since the route to Lonely lake is difficult to find, a guide had to be secured, but unfortunately treaty payments were at hand and none of the Indians on the Wabigoon reserve wished to go with us. At last an "American" Indian, who received no treaty money, was engaged, and we were ready to start on July 11th.

SANDY LAKE.

Sandy lake is a fine body of water six or seven miles from north to south, by four miles from east to west. It contains few islands and these small, so that a sea dangerous to Peterboro' canoes may easily rise, as we had occasion to discover. The water of Sandy lake is beautifully clear, forming a pleasant contrast to the very turbid, brownish waters of Wabigoon lake and its tributaries. The shores are not generally high, and often consist of drift materials covered with second growth woods. The Hudson Bay Company have two large York boats on it to transport supplies and bales of fur from their storehouse at the northeast end of the long portage to the next portage into Minnietakie lake.

Exploring the eastern shore.

Owing to the bad weather and the short time allotted for this lake, on which no indications of gold have been found, we explored only the eastern shores. For about two miles east of the landing at the long portage a rather coarse-grained, reddish gray granite is the only rock found. Here a point which projects displays a small mass of gray schist, seemingly included in the granite, having a strike of 40° east of north. A third of a mile to the northeast contorted grayish gneiss occurs in the granite, and beyond this gray green Huronian schist with a strike of about 70°. In a deep bay on the east of the lake hard, green banded schist with small, bluish quartz veins occur, having a strike of 30°; and on the northeast side of the bay similar schists with more or less contorted bedding show a strike of 20° or 25°.

The point that projects to the south of the portage to Lake Minnietakie consists of coarse-grained porphyritic syenite of a light flesh color. At the portage contorted green schist occurs again, so that the syenite is apparently an isolated boss. An island west of the point is formed of the same rock.

Geology of Sandy lake.

The shore northeast of the Minnietakie portage, for at least half a mile, is of green Huronian schist, but the rest of the shore line was not examined.

Dr. Bell includes Sandy lake in the geological map of the Lake of the Woods,[8] published in 1881, marking as granite an area lying between the south shore of this lake and the northeast shore of Little Sandy lake. The rest of the shore line he indicates as Huronian. The two areas of acid eruptive rocks found by us on the south and east shores of the lake differ greatly in character, one being an ordinary hornblendic granite, the other a porphyritic syenite, so that they probably represent distinct outflows; both

[8] Geol. Sur., Maps for 1880-81-82.

are very much like examples of the so-called Laurention of Rainy lake, but the inclusion of portions of schist proves that they are later than the Huronian in age.

The schists are usually like the harder green Keewatin of Rainy lake, but some parts, especially the large inclusions in granite, are really gneisses or gneissoid mica schist, and remind one of the rocks named Couchiching, in the Rainy lake region. As these were described in last year's report, nothing further need be said of them here.[9] The great variation in the strike and the contortions of the schists probably arise from the disturbance caused by the adjoining eruptive masses.

LAKE MINNIETAKIE.

A name of probable Sioux origin.

Sandy lake empties into Minnietakie with a fall, as measured by aneroid, of twenty or twenty-five feet. However the canoe route does not follow the creek, which flows from the north end of the lake, but crosses a steep portage of a quarter of a mile at the point where the two lakes approach one another most closely. It will be remarked that the name Minnietakie is a foreign one, quite unlike any name given by the Ojibways, but resembling Indian names in Minnesota, *minnie* being "water." It is said that this lake was named by the Sioux, who sometimes made forays in this direction. Our guide could give no explanation of the word.

Extent and general character of the lake.

Minnietakie is more than twenty-seven miles in greatest length, and at some points several miles wide, but it is very irregular in shape, having long, narrow bays toward the southwest and wider stretches with many large and small islands toward the northeast. The eastern part of the lake is given quite incorrectly on the maps, but it seemed inadvisable for us to attempt to map it in the short time allotted to the Lonely lake trip. The water of this lake is beautifully clear, like that of the previous lake; and its shores are usually rocky, though stratified sand rises to a height of about twenty feet near the middle of the southern shore and is washed into beautiful beaches.

Geology of the shore formations, and occurrences of gold bearing quartz veins.

The entrance to lake Minnietakie is by a narrow bay running first northeast, then curving to the east, about seventeen miles long, before the lake widens. A long point separates this bay from a shorter one with more varied outlines to the south. The whole shoreline of this part of the lake consists of Huronian rocks of great variety, chiefly the green schists described by Dr. Lawson in the region to the south as Keewatin. In general the strike of the schist is parallel to the direction of the bay. Just after crossing the Sandy lake portage, the schists are hard and folded. Half way along the projecting points consist of yellowish sericite schist, evidently altered quartz porphyry, and at some places of true porphyry with large blebs of quartz. In the inlets along shore one finds the green schist; so that apparently the bay has been hollowed out of a band of the softer yellowish altered quartz porphyry, the harder portions projecting still as points. A small outcrop of rather fine grained granite or gneiss occurs on the northwest shore not very far from the portage, perhaps in connection with the gneissoid rocks of Sandy lake. A

[9] Bureau of Mines Report for 1894, p. 81, etc.

somewhat lustrous gray clay slate or phyllite is found on the point near the opening of the long bay into the lake.

At several points along the southeast shore of this bay there are veins of quartz more or less charged with sulphides. Fahlbands, i.e., beds of schist containing much sulphide, such as copper pyrites, are also found widely extended along the shore. A claim has been staked by James Mackenzie on a good looking bedded vein of quartz on this shore. Several assays made in the laboratory of the School of Science, Toronto, of quartz and rusty or pyritous schists from this bay, gave traces of gold, but none of the specimens contained more than about $2 per ton. As our specimens were taken so as to give average examples of the more promising parts of the shore line as seen from the canoe, the results must be taken as proving that the region is quite widely auriferous. Whether veins containing rich enough ore to be workable will be found along this part of Minnietakie cannot be said positively, but the region is certainly worth prospecting.

Quartz veins with traces of gold.

The long bay stretching seven miles along the southern shore of the long point just described has on its shore rocks of a quite similar geological character, sheared porphyroids and green Huronian schists, and need not be described in detail.

Northeast of the long point a wider reach of the lake stretches five or six miles, open and mostly free from islands, and then widens to a transverse portion more than ten miles in length from northwest to southeast. This portion, unlike the southwestern end of the lake, is more or less filled with islands, and has its shores greatly cut up with deep bays.

The northwest shore presents chiefly green schists with some veins of quartz and bands charged with sulphides, but two assays of rusty quartz showed only traces of gold. Going northwestward along the southern shore, much of the beach is found to consist of Laurentian boulders at first ; but the only rock found in place is hard, gray-green, and scarcely schistose, and is probably an eruptive rock of Huronian age. This was found on a small island

Clay slate of a dark gray color and showing two directions of cleavage is found west of the bouldery shore and contains some small bedded veins of quartz with sulphides ; then follows a beautiful sand beach consisting almost wholly of garnet and magnetite, derived no doubt from adjoining sand cliffs which rise about twenty feet from the lake and are being undermined and re-arranged by wave action.

Near the point where the shore bends to the south, green chloritic schist is found, but a dark gray slate interbedded with sheared porphyrite occurs at the south end of this arm of the lake. From this point round most of the eastern shore to the outlet of the lake, Huronian rocks of green or gray color, sometimes very schistose, and at others massive looking, are found ; no doubt the "greenish Huronian schists, mostly of a dioritic character," mentioned by Dr. Bell. The islands however, which are many and often large, with narrow channels between, present more variety of constitution. On one of

[10] Geol. Sur. Can., 1872-73, p. 101.

Eruptive diorite.

them a gray-green porphyrite with crystals of white striated felspar half an inch long was obtained; and on another an eruptive mass of greenish-gray quartz diorite, quite like some of the so called "protogine" of the Shoal lake region on Seine river. The same granite-like rock was found to extend to the eastern end of a deep bay on the mainland; but for lack of time its outlines were not completely traced. Near by some very large veins or masses of quartz occur on islands, rather barren looking however in most places. One specimen of very rusty ore from this part of the lake was found on assay to contain only a trace of gold. Near the outlet of lake Minnietakie schist conglomerates make their appearance on both shores, and a specimen of quartz containing sulphides from a vein in these rocks was found to carry $2 of gold per ton.

Structure of rocks near the outlet of the lakes.

The structure of the rocks at this end of the lake is very complicated, perhaps because of the eruption of quartz diorite or the porphyrites, though the latter appear to have been interbedded with the other Huronian rocks. The strike of the schists varies from 35° east of north to 80°, and sometimes within short distances. In general the direction of the edges of the schists is about northeast and southwest, with a dip of 70° or 80° toward the northwest near the outlet of the lake; but, according to Dr. Bell, in the opposite direction at an angle of 60° at the southwestern extremity of the lake, which which was not visited by us.[11] At that point Sturgeon river enters the lake, forming its largest tributary. We discovered another river entering a narrow bay from the south.

It appears that in general the complicated outlines of the islands and bays correspond roughly to the varying strike of the rocks on their shores, the softer layers having been eaten away, leaving the harder ones as projecting ridges or bosses. The outlines of the lake as shown in the map[12] are very far from correct, so much so that we have found great difficulty in placing the points at which observations were made even approximately on the shore-lines as given. At least three bays, each perhaps two miles or more in depth, should be represented on the eastern shore, and a similar one on the northwest shore near the entrance to the long southwest bay.

ABRAM'S AND PELICAN LAKES.

Position of the lakes.

A ridge of rock forms a short fall or rapid at the north end of Minnietakie and separates it from a pretty body of water, Abram's lake, which, after being nearly cut in two by a narrows, empties through a short river-like stretch into Pelican lake. Each of these lakes is about four miles broad in a northwesterly direction along the route to Lonely lake, but has its greatest length of perhaps six or eight miles in a direction transverse to this. Like Minnietakie, these lakes have clear waters and green shores not recently touched by fire.

The Sioux lookout.

Abram's lake is stated to be the most northerly point reached by the dreaded Sioux in their warlike incursions, and a hill on its shores, the highest

[11] Geol Sur. Can., 1872-73, p. 101.

[12] Map of the country between lakes Superior and Winnipeg, Ottawa, 1884.

in the neighborhood, has been named the Sioux Lookout, from which they were supposed to watch for the approaching canoes of their unsuspecting enemies of the north.

Geological character of the lake shores.

The shores of Abram's lake are formed of pale greenish gray, felsitic looking schists, sometimes pyritous and browning when weathered, of the ordinary green schists, and of a sort of boulder conglomerate, containing well rounded stones (quartz diorite or granite) a foot through. The southern end of Pelican lake also consists of Huronian, but of harder and more hornblendic schists. A mass of granite rises through them on the shores of the small bay to the southwest, and they are more or less interbedded with the Laurentian rocks of the northern end of the lake, gray gneiss alternating with the hard green schist. This relationship is the same as one finds on Rainy lake when green Keewatin schist comes in contact with so-called Laurentian, really with an eruptive or at least plastic rock of later age than the Huronian schist which it has penetrated and hardened.

The Huronian of these two lakes contains some small quartz veins, but not of much promise. A specimen of the pyritous schist from Abram's lake was assayed, but contained no gold. Dr. Bell reports that a similar schist, probably from the same general locality, assayed by Dr. Hoffmann, also gave no trace of gold.[13]

The "Laurentian" (to use the term generally employed for the gneisses and granites of the west of Ontario, in spite of the fact that they appear to be younger than the Huronian,) of the northern part of Pelican lake consists of gray banded gneisses in part, but also of flesh-colored rocks only slightly schistose and of undoubted granites. Some large inclusions, apparently of Huronian rock, have been metamorphosed to mica schist, and sometimes contain great numbers of garnets.

The general strike of both schists and gneisses is 70° or 80°, though there are sometimes great local variations and the outline of the bays conforms generally to this direction.

PELICAN LAKE TO LONELY LAKE.

A Laurentian region from Pelican to Lonely lake.

From Pelican lake onwards the whole journey was through a Laurentian region, and no attempt was made to follow the variations of the rock with minuteness, since up to the present the Laurentian of western Ontario has proved barren except at its contact with the Huronian.

The route follows Pelican river to the west into Lost lake, and then turns north through a series of small lakes and marshes, including Grassy lake and Canoe lake, until Lonely lake is reached.

Shortly after leaving Pelican lake a series of violent rapids is reached where a portage of about a third of a mile must be made. Just above this, dark red syenitic gneiss was observed on an island. A mile or two to the west the outlet of this chain of lakes turns off to the northeast, reaching Lonely lake by what is called Sturgeon Lake river. This river is navigated

[13] Geol. Sur. Can., 1872-73, p. 102.

by York boats from the Hudson Bay post on Lonely lake, but canoes generally follow the shorter, less exposed route through the small lakes before mentioned.

Frenchman's Head village,

Continuing west, Frenchman's Head is reached on Lost lake, the first point in a large Indian reserve stretching north to Lonely lake. The village is placed at a narrows two or three miles west of the point. The scenery after leaving the rapid is very pretty, but the shores are mostly covered with moss and trees, so that exposures of rock are rare.

and its thrifty inhabitants.

The village is lively and picturesque, and is the seat of a Church of England mission with a neat little church and parsonage. These Indians come very little in contact with white men, and are said to be all the better for that. We camped for the night opposite the village, and presently a swarm of canoes paddled over, and their good natured owners gathered round with great curiosity, especially as to the Peterboro' canoes, which apparently some of them had never seen before. They were never tired of examining them, and the old chief praised them as much better than their own birch bark ones, None of the men we met could speak more than a few words of English, though some of them had been as far into the world as Rat Portage.

These Indians are the thriftiest we have seen. They have luxuriant, well weeded gardens, in which corn, turnips and potatoes were growing; and their houses are built of squared timber, with a roof covered with bark, and a chimney. They whipsaw all the lumber used for doors, etc., and appear to be quite equal to rough carpentry.

Through Grassy and Canoe lakes, into Lonely lake.

Passing the village, the canoe route turns north and makes its way through wide marshy bays, where our guide lost his way for a time. A portage of more than a mile leads northward over level, rich looking woodland to Grassy lake, which is largely a broad marsh grown up with reeds and wild rice. A short creek leads into Canoe lake, from which there is a portage of about half a mile to a stream flowing into Lonely lake. Four miles of very different navigation on a bay, and then past a long sandy point, take one across the lake to the Hudson Bay post on the northern shore.

Character of the exposed rocks along the route.

The rocks exposed along the way are chiefly gneiss, sometimes containing great angular or rounded masses of darker colored rock. At one point the whole rock, which consists of lighter and darker gneiss, seems to have been crushed and re-cemented by a paste of granite, forming a gigantic breccia. At other points the gneiss is well banded and resembles that commonly found in eastern Ontario.

LONELY LAKE, ON THE NORTHERN BOUNDARY.

A picturesque scene at the Hudson's Bay post.

Lonely lake, or Lac Seul, to use the original French, is more commonly called Lake Saul or even Lake Sault, no doubt a corruption of the French name. It comes next in size after the Lake of the Woods in far western Ontario, and forms the boundary for a hundred miles between this Province and the little-explored territory of Keewatin. The Hudson Bay post at which our canoe route ended is planted on a strip of sandy beach just opposite a long sandy point projecting from the Ontario shore, a point that immediately

catches the eye from the fine group of wind-swept white pines standing upon it, giving the name of White Pine narrows to the blue channel separating Ontario from Keewatin.

The first glimpse of the Lonely lake post across the narrows is a great surprise. After all the wilderness of lake and woods, and after the picturesque but humble log cabins of the Indians, one suddenly sees a thoroughly civilized group of buildings, one of the houses a handsome summer cottage in appearance, standing on a yellow sandy shore or among shapely evergreens with wooded hills for a background. Beside the Hudson Bay post with its buildings, a Church of England mission with its pretty church and house gives the place the look of a trim summer resort, and indeed but for the tedious portages of the canoe journey it might very well serve that purpose if western Ontario were not so well provided in other quarters with summer play grounds. There are no Indian inhabitants except one or two employés of the company; but a considerable number live in villages on the two reserves just south of the lake, and at Sunday service the little church is crowded with a well-behaved audience, only half a dozen of whom are white.

The Church of England mission station.

The Hudson Bay post, which is an important center of distribution, is in charge of Mr. Jabez Williams, who takes much interest in the mineralogy of the region, and especially in its gold deposits. The bales of fur collected during the winter are shipped from this post in large, well-built York boats, half a dozen of which were drawn up under a shed on the beach. These boats, which are built here by halfbreed carpenters, carry a sail and a crew of seven or eight and are said to be good sea boats. They are dragged across the portages on a line of skids, two crews uniting to draw a single boat. The planks of which they are built, some of them twelve inches wide, are cut with a whip saw from logs obtained a short distance northwest of the post.

York boats of the H. B. Co.

The only solid rock found in the neighborhood crops out as a point near the church, and consists of a coarse-grained reddish gray porphyritic gneiss, much like some gneisses on Rainy lake. According to Dr. Bell, who has twice visited the lake,[14] it lies wholly within the Laurentian gneisses; and on this account it seemed inadvisable to put any time on its further exploration. The report of the finding of gold on Lonely lake was founded on a mistake; and according to Mr. Williams no minerals of any special value have been discovered on its shores, though specimens of pyrites, molybdenite and magnetite have been obtained in small quantities.

Rocks and minerals.

The drift deposits near the post are of much interest, forming a cut bank thirty-five or forty feet high just west of the settlement, and a series of sandy hills with some boulders to the north; but they will be described in the chapter on the glacial history of the region as a whole.

In general there is much more loose material and good soil north of the Canadian Pacific Railway than I had supposed, if the portages and lake shores on our route give a fair idea of the average character of the country. The shores are all green, the last great fire having swept through about twenty years ago, and a considerable variety of trees was observed, including

Timber, soil and climate o the district.

[14]Geol. Sur. Can., 1872-73, pp. 102 and 103; also vol. for 1886, p. 8 G.

white pine, red pine and jack pine, spruce and cedar, birch, poplar and balsam poplar. Some of the pine is large enough to be of value, and the spruce and poplar would answer for pulp wood.

Its suitability for agriculture.

The soil and climate seem well adapted for the growth of vegetables. On July 15th potatoes and tomatoes were in bloom in the mission garden, and Indian corn looked thrifty, but it was a surprise to find the grasshoppers present in clouds, giving some of the vegetables a hard fight for life. The garden was surpassed however by that of the Rev. George Prewer at Wabigoon Tank, where on July 9th the early green peas were almost too ripe to eat, potatoes were about ready for use, and a field of oats was just coming into head.

There seems no reason from the geographical point of view why Ontario right up to its northern boundary should not have a summer climate suitable for agriculture. The Hudson Bay post on Lonely lake lies south of lat. 50° 30′, is only a few miles north of Winnipeg and a degree south of London, England.

The outlook for gold in the region.

Looked at as a region for prospectors, there is no probability that gold will be found in the Laurentian north of the southern end of Pelican lake, and no gold has been found north of lake Minnietakie, thirty miles northeast of the railway. Our assays prove the presence of gold at a number of points on the latter lake, though no assay went beyond $2 to the ton. Mr. Williams has found gold by panning the quartz from a small lake which we did not visit, between Minnietakie and Lonely lake. A specimen from a large vein on Muskalunge lake, south of Lonely lake, given me by Mr. Williams, gave a trace of gold when assayed. Gold has been reported from Sturgeon lake, east of Minnietakie; and may be looked for with some probability of success in any of the areas of Huronian to the north of the Canadian Pacific. Up to the present however none of these deposits have been proved to be of workable value. When as much work has been done north of the railway as on the Lake of the Woods and the Seine river to the south of it, it may well be that valuable gold properties will be developed there also.

Our return journey to Fort Frances followed the same route as we had taken in going north, so that no special mention need be made of it, except to state that some of the wider lakes were stormy enough to make the passage of our shallow built canoes very uncomfortable, if not dangerous. Fort Frances was reached on July 27th.

The Seine River Region.

Little America and

On July 27th we began our journey to the Seine river and Bad Vermilion lake, examining the two mines on the Minnesota side of Rainy lake on the way. The Little America mine, described in last year's Report,[15] was found to be shut down. Its history since the previous summer had been a checkered and on the whole unfortunate one. We found that a good boarding house and a small steam hoisting plant had been added to its equipment, and that a new shaft was being sunk, under the management of Mr. Whitely, the

[15] Page 53, etc.

intention being to strike the vein at a more convenient point and in a more workmanlike fashion than formerly.

The only other mine in Minnesota territory on which any important work has been done is the Lyle mine on Dryweed island, opposite the deserted "Sand Point City" on the Canadian island of the same name. We found this to be operating on bedded quartz veins in green Keewatin schist. There was no very large body of solid quartz to be seen on the surface, and we did not descend the shaft. The quartz on the dump contains pyrite, a carbonate, probably dolomite, and some black tourmaline; but we saw no free gold. Lyle mine,

We were informed that the shaft was down about one hundred feet and that fourteen men were employed, ten of them miners working in two shifts. There is an excellently equipped ten stamp mill with two Frue vanners; but this had been in use only twice in an experimental way. There were unfavorable reports as to the poverty of the ore; and if these are correct one can only feel sorry that so much energy and capital should be wasted on one of the least promising properties in the region. on the Minnesota side.

On the way to the mouth of the river Seine, the row of islands fringing the south shore of Seine bay was visited, and their white, chalky looking cliffs were found to consist of anorthosite, often displaying immense crystals of striated felspar, some of the cleavage surfaces covering nearly a square foot of surface. Anorthosite cliffs on Seine bay.

Paddling up Seine river we reached the mouth of Bad Vermilion creek, up which we turned to the lake of the same name. Many changes had been made since last year, when there was not a house in the region except Indian shanties on the reserves. There were the beginnings of clearings here and there, and an inhabited house at the mouth of the creek with a bit of garden about it, and a well providing delicious water, a most welcome refreshment on a July day with nothing but the flat and brownish river water to be had elsewhere. On Bad Vermilion lake.

On the first portage we met a party sent out by the Smithsonian Institution, with the co-operation of the Dominion government, examining into the kinds of fish inhabiting the waters. They were provided with sounding apparatus and nets for deep fishing. We were told that in Bad Vermilion lake they obtained from the cool depths some fine specimens of lake trout, which never show themselves nor take the hook in warm weather in these waters. The report of this expedition should be of great interest not only in regard to the fisheries of these lakes, but also as to their depth and other important features. An international fish expedition.

BETWEEN BAD VERMILION AND SHOAL LAKES.

At the time we visited Bad Vermilion during the previous summer no gold discoveries of any importance had been made on its shores, though a small number of locations had been taken up on Shoal lake to the southeast, including the Wiegand's veins in an area of granite not mapped by Dr. Lawson. It was decided to spend a short time visiting the locations where work of any importance had been done, and also if possible to trace the outlines of the granite and the associated anorthosite. The accompanying map Mining locations in the granite and anorthosite areas.

embodies the results of this work, which however might be made more complete by a longer and more careful study of the district. The more interesting petrographical features of this important group of eruptive rocks will be mentioned later.

At a point on the way up the creek, near a narrows where granite comes in contact with gray green schist, a small pit has been sunk, showing quartz with copper pyrites and fragments of schist, but no distinct vein was to be seen. Exploring the narrow bay to the northeast near the head of the creek, and pushing our canoe through greenish foul-smelling water of the consistency of pea soup, we found that its east shore was of granite and its western one chiefly of anorthosite. The granite touches the eastern shore of Island bay also, and then runs inland toward the north.

Veins in the anorthosite.

Since last summer the whole region has been scoured by prospectors, and almost all the land in sight has been surveyed into locations. Many locations have been taken up also to the south of Little Turtle river and between it and the Seine above Shoal lake. It is probable that only a comparatively small number of these will prove to be of any value. Some were even located and surveyed when the snow was on the ground, and neither rock nor quartz veins were visible. Several of the properties, especially those in the anorthosite, appear to contain no large bodies of quartz, but only small irregular masses, generally associated with smaller or larger inclusions of schist in the eruptive rock. Apparently the quartz does not belong to the anorthosite in these cases, but to the schist, as one would expect in so basic a rock. The owners of these pockets of quartz speak of the vein as "capped over," and consider them important, though only "surface croppings," since they are "sure to widen as they go down."

Some of these small pockets of quartz contain copper pyrites and other sulphides and probably carry some gold, but the only specimen of such quartz from the anorthosite which was assayed yielded no gold. At one or two points what is apparently a vein of schist or "slate," without quartz, occurs in the anorthosite and strange to say may carry gold, according to Mr. W. E. Stone, a prospector in the region. He states that one band of schist gives colors in the pan, and a specimen which he showed me contained a small speck of gold. So far as the evidence goes however the anorthosite appears to be completely barren, except where it has caught up inclusions of the surrounding more or less auriferous schists, and the locations taken up on this rock are not likely to be of value.

Veins in the granite.

On the other hand, many of the locations on the eastern area of granite and some of those in the green schists to the east of this look very promising.

A day was spent in visiting some of the more important of them, going inland by a road cut from Island bay and running to Shoal lake.

Campbell's location.

The Campbell property, AD2, lying some distance north of the road, was visited first, and several veins in the granite were examined. One, which has a strike of 100 degrees, can be traced for a considerable distance with slaty walls. The quartz contains sulphides and looks well. Another striking northeast and southwest sometimes divides into four or five parts, in all eight feet wide including partings of rock matter.

A little further north the granite touches the green schist, some of which is in reality a coarse conglomerate, well seen on top of the highest hill in the region. In the green schist, or perhaps rather fine grained diabase, also veins occur, as at Randolf's location, where a vein four or five feet wide runs northwest and southeast. Randolf's location.

Turning south again, one of Kelley's locations, AL111, which is within the granite, was examined. A vein six inches wide, with a strike of 100 degrees, contains considerable free gold associated with the usual sulphides, pyrite, zincblende and galena, in whitish quartz. Another of his veins having a similar strike is two or three feet wide, and a third, which cannot be traced very far, contains a quantity of sulphides. Kelly's locations.

Finally the Lucky Coon or Hillier mine, 655P, was visited. It was at that time the property of Messrs. Campbell, Robertson, Mosher, Hillier, Steele and Miller; but according to newspaper reports it has since been sold to English capitalists. Here two veins had been somewhat worked, No. 1, which strikes about 135°, to a depth of twenty feet; No. 2, which strikes 110° and dips a few degrees to the southwest, is about four feet wide at the top, and eight feet eight inches at one point at the bottom of the shaft, which had been sunk fifty feet. There are several other quite large veins on which no work had been done, all in the granite. The quartz from the shaft is reddish and more or less charged with sulphides, and looks very well. Lucky Coon or Hillier mine and mill.

A small five-stamp mill was erected on this property, at that time the only mill in the region, but owing to disagreements between the owners it was not working. The mill was unprovided with a vanner, so that no concentrates were saved, apparently a wasteful state of affairs in working an ore containing so much sulphide. I was informed that the mill had run only twenty days, treating on the average fifteen tons in twenty-four hours. The average contents of gold per ton of ore were said to amount to $28 to $30, of which perhaps $8 was free milling, while the rest was supposed to pass off with the sulphides. Some of the tailings obtained at the mine, perhaps not an average sample, were assayed in the laboratory of the School of Science, Toronto, and proved to contain only a slight trace of gold per ton.

Turning south again we descended Bad Vermilion creek and then turned east into Shoal lake, which we found greatly changed since last year, when a tent and a bark canoe were the only sign of life visible. Now on turning into the lake we were passed by a bustling little steamer and saw before us the half-dozen houses of Seine River City, the metropolis of the new gold region, while in the blue distance stood the group of buildings at Mine Center, near the other end of the lake. Signs of activity on Shoal lake.

Here some time was spent in examining the original Wiegand locations, probably the best looking properties in the region. We found that a number of veins in the granite had been stripped and several small shafts and openings made, but no real mining had been done. The Weigand Brothers' locations.

The Wiegand Brothers have disposed of several of their properties, AL 74, 75 and 76 which are now owned by Mr. Foley. Under the new owner- Promising prospects on AL 74, 75 and 76.

ship there is every prospect that the property will be fully tested and the question will finally be settled as to the depth and value of the gold bearing veins. At the time of our visit a good road was being cut from the lake half a mile inland to the camp, and it was intended to sink deep enough on some of the veins to make sure of an ore supply before spending money on a mill, thus most wisely reversing the usual unbusinesslike procedure in western Ontario. No mining was being done on August 2nd, nor had any of the openings been sunk to any great depth, but according to newspaper reports shafts have since been sunk to two hundred feet on one vein and over one hundred feet on another, with the result of proving the presence of a sufficient body of ore to warrant erecting a mill.

Two views of the granite masses.

Last summer the opinion that these veins in the granite might prove to pinch out rapidly in depth seemed to be somewhat prevalent, some thinking that the granite is only a flat, thin sheet spread over the green schist or conglomerate. There seems no good reason however for this conclusion. Such areas of granite are not to be looked on as laccolites, or lenticular masses squeezed in between the layers of schist, but as broad based masses of unknown depth, probably widening as they go down. If the latter view is correct there is no reason for doubting that some of these true fissure veins, which have been traced for long distances between well-defined walls on the surface, should not go down to very great depths, still remaining within the granite.

Varying character of the ores.

The ore varies greatly in different veins at no great distance apart. At one of the dumps on the Foley property we found rather white quartz with only a small quantity of sulphides visible, but almost every other fragment contained specks of free gold. This ore should be quite free milling. At another opening however, on AL 74, where a shaft had been sunk to a depth of thirty one feet, the ore is of a very refractory kind, containing much zinc-blende, iron pyrites and copper pyrites and a little galena ; so that the treatment advisable for the ore from one vein may be quite inapplicable to that from another.

Formation of some large veins.

Several other veins in the neighborhood were examined, one on AL 104 being nine feet wide in places and tracable three eighths of a mile, though the quartz is not as promising as in some smaller veins. A singular structure may be seen on some parts of this vein, the edges being of solid quartz, but the interior largely made up of strips of granite drawn out in a diagonal way and separated by bands of quartz

Vein of quartz in granite, showing granite drawn out diagonally in centre of vein. Shoal lake, AL 104.

The modified granite, or protogine.

Some of the larger veins have the quartz more or less sharply divided into bands parallel to the walls, probably because the fissure has been widened at successive times, each time having a band of quartz deposited in the fresh space.

In almost every case the granite, which is coarse grained and a typical granite, flesh-colored, and with black

mica in unaltered parts, becomes modified into a greenish, chloritic granite, the so-called protogine, near the vein; and at its very edge is changed into a greenish schistose rock consisting of quartz grains and chlorite or sericite, but almost entirely free from felspar. This band of modified granite probably results from a shearing motion which had ground down the softer minerals, when the fissure, no doubt accompanied by faulting, was formed. The circulation of hot water in the fissure probably completed the change of the crushed felspar in sericite masses. The characters of these rocks have been described by Winchell and Grant, and their work was quoted from in the last volume of this report.[16] As the general features of the granite and the veins which it contains were described in the previous report, little need be said of them here.[17] It may be remarked however that the gold of the Shoal lake region impressed me as being rather pale in color and usually in very fine particles as compared with the coarse, yellow gold of the Lake of the Woods

At the time of our visit everything was very quiet in the region, the shutting down of the Lucky Coon mine having had a very discouraging effect; but judging by later reports as to the working of a location under the energetic direction of Mr. Whitely and of the satisfactory results of the shafts on the Foley properties it is probable that the region will soon be thoroughly tested. I am still of the opinion that this district has good prospects as a gold mining region, though many of the prospectors who rushed in and seized on every unoccupied part of the granite area without reference to the finding of distinct veins will probably make nothing for their trouble. Some of them underwent great hardships. One Australian prospector, beside whom we camped on a picturesque rocky hillside on Bad Vermilion lake, gave us a vivid account of how he and his young son passed the previous winter in their small tent, facing weather in which the mercury was frozen. Several of the earlier prospectors however have made sales, in which at least part of the payment was in cash, and will not go empty handed; but as usual the larger rewards will probably fall to the lot of those with more capital.

Prospects of the region.

It is worthy of mention that a good deal of fairly good land may be seen on some of the locations and along the Seine river, and a considerable area of excellent land occurs near the Little Turtle river, so that agriculture may add to the resources of the region, the mining community furnishing an excellent market for any produce.

Agricultural lands.

BETWEEN LITTLE TURTLE RIVER AND THE SEINE.

Many locations have been taken up in the Keewatin schists between Little Turtle river and the Seine, some of them on Timber Berth No. 34, where difficulties have arisen as to titles. The only properties visited by us were those of Bull, Price & Co., which lie a mile or two north of the narrows between Shoal and Wild Potato lakes. Here there are several veins, usually of a bedded character in a very cleavable talc or sericite schist or slate, having

Locations on Timber Berth No. 34.

[16] Prelim. Rep. on Rainy Lake Gold Region, Nat. Hist. Sur. Mich. 23rd An. Rep., 1894, p. 58, etc.

[17] Fourth Rep. Bur. Mines, 1894, p. 55, etc.

a strike of about seventy degrees. The rock itself contains pyrite, and the quartz affords rich samples of free gold. Several short narrow veins on JO13 show a large amount of free gold on the surface, but have not been sunk upon at all. The veins appear to be in the talcose or sericitic rocks, and not in the green schist which extends between them and the river. Few of the veins appear to cut decisively across the strike of the country rock or to have distinct walls, but several of them appear rich enough to be of value.

It is reported that native copper has been found on JO13 with the gold ores, but the gentlemen who took us over the property were unable to find a piece to show us.

It should be noted that the small cross veins are generally very much richer in gold than the wider quartz lenses of the bedded veins.

The Seine, from Shoal Lake to Steep Rock Lake.

Above Shoal lake the river Seine narrows for a mile or two and then widens into Wild Potato lake, where there is an Indian reserve, narrowing again for a stretch of about six miles, when steamboat navigation ends at the pretty Sturgeon falls. Above this there is a succession of short stretches of more or less calm water, interrupted by small falls or rapids, a troublesome journey in a canoe from the constant short, rocky portages, often with very rugged and slippery paths; but full of most beautiful scenery, the yellowish white foam contrasting with the dark brown and amber water and grim rock walls, with wild, unburnt forest as a setting. The variety is very striking. A reach of quiet river with no rock in sight, but reed-margined and so absolutely still that the reflection of the forest is perfect except where the canoes ripple the surface is followed by a tumultuous current up which the canoes must be padded or poled with all one's strength among great boulders or jagged edges of rock, until at last the thunder and foam of a water fall compel one to land and seek the portage.

A variety of striking river scenery.

Including Sturgeon falls, at the head of navigation, there are thirteen rapids or falls past which one must portage in order to reach Calm lake, or Nonwatin lake, as it is named on the map of the Geological Survey, a distance of only twelve miles, the ascent being in all a hundred and twenty-five feet as determined by aneroid. For most of the distance the rocks exposed on the portage are green Huronian schists, sometimes containing small quartz veins. During the latter part of the journey, where the river flows south, it crosses the strike of the schists, and here the rapids have a special character; each being very short and formed by a sort of dam of the steeply dipping schist. Where the rapids occur in granite, which has more rounded forms, there is apt to be more variety and a greater length of white water.

Rapids and falls from Sturgeon falls to Calm lake.

Calm or Nonwatin lake is enclosed at each end in Huronian schist and porphyry, but a band of Laurentian crosses its center. It is a beautiful lake, with green hilly shores, rocky promontories and curves of yellow sand beach in the bays. No locations have been taken up on Calm lake, but a number have

Calm lake.

been in the country between this and Sturgeon falls. None of them appear to have been developed sufficiently to make it worth while to visit them.

Leaving Calm lake one finds that the river resumes its character with swift currents, rapids and placid lake expansions, the rock when exposed being sericitic or chloritic Huronian schist and slate. After an archipelago one enters Perch lake. Eye river comes in from the north at the upper end of this lake, and a few miles to the east there is a bay on the north from which Harold lake may be reached. Calm lake to Harold mine.

At several places along the part of the Seine between Sturgeon falls and this point there are drift deposits of angular or rounded pebbles and boulders, generally of Laurentian rock, but no wide stretches of rich alluvial clay as on the river below Sturgeon falls.

HAROLD LAKE GOLD LOCATIONS.

Harold lake may be reached either by paddling up a weedy, narrow stream and crossing a small lake and short portage, or by a trail a mile or more in length across the somewhat boggy and rocky country. Here a number of veins have been discovered and partially developed by the enterprising Wiley Brothers of Port Arthur ; and a winter road has been made by the Ontario Government from Bonheur station on the Canadian Pacific Railway to the location, so that the heavy machinery for a stamp mill might be brought in. At the time of our visit (August 7th), the mill, which is of five stamps, from Fraser and Chalmers' works, with a Gates crusher, had been running for three or four days, in charge of Mr. Peters, but no clean-up had been made. Since then however a number of gold bricks have been turned out and the property put in good working order. Four houses had been built, a small steam saw mill being used to cut the lumber, and sixteen men were employed. The hoisting was done by horsepower. Mine and mill on the lake.

Geologically the surroundings are interesting, the country rock consisting of various yellow and green schists, pierced by small eruptive masses or bands of granite or protogine, as the rock may be called, since mica is partly replaced by talc or sericite. Granite masses in Huronian schists.

All of these rocks are much disturbed and badly weathered, the granite showing the shattered quartz fragments resulting from crushing. Some of the veins occur in the granite itself or at its contact with the schist, and others entirely in the schist. The latter rock varies much in character, some parts being sericite schists, much weathered, while another portion of the country rock consists of an intimate mixture of quartz and dolomite. Close to one of the veins the granite has been changed into a shaly material, forming a good wall, while at another vein the country rock, a schist, is yellow and friable as if attacked by acid fumes. The veins themselves are not very wide, the widest measured reaching about two feet and a half feet, but some portions of the quartz, especially from a vein exposed on the cliff at the lake shore, show a good deal of free gold. In the latter instance a number of tons of very rich looking ore were obtained by draining off the lake for a few feet and gathering up the quartz boulders. Some of the quartz is heavily Occurrence and character of the quartz veins.

charged with sulphides, pyrite, chalcopyrite and galena; other parts are very cellular, from the weathering out of pyrite. In the protogine granite forming the walls of the veins there are frequently sulphides bearing gold, and it is not impossible that the eruptive granite masses are the source of the gold, as they appear to be on Shoal lake and some parts of the Lake of the Woods. These quartz veins vary much in strike, some running nearly north and south, and others nearly east and west. The dip varies from vertical to 60° or 70°.

A very singular vein, apparently not auriferous, occurs in the granite near the camp, having from a foot to a foot and a half of quartz against each wall, but the center formed of two or three feet of crumpled green schist charged with small knobs and veins of quartz. It is possible that the strip of schist has been carried off by the molten granite and after cooling formed lines of weakness on each side where fissures formed and were filled with quartz.

Vein of crumpled green schist between bands of white quartz in granite. Lake Harold.

Sawbill lake gold location.

After our arrival at Port Arthur, one of the Messrs. Wiley gave me several very rich specimens of quartz from a vein on Sawbill lake, nearer to the Canadian Pacific, and said to come from larger and more continuous veins than those of Harold lake. I am informed that they intend to put a stampmill on this property also. Neither of my maps show this lake, but the property must lie in or near the strip of green Keewatin schist stretching from Harold lake northeasterly toward the railway. As its discovery had not been reported when we passed through, we had no opportunity to visit the locality.

Rich ores from Harold and Sawbill lakes.

An assay was made of a specimen from the Harold lake property, giving $108 in gold and three ounces of silver. This specimen was taken by myself and showed no free gold, but was undoubtedly much richer than the average ore. An assay of material from Sawbill lake, given me by Mr. Wiley, yielded $170 in gold, but was evidently a picked sample.

STEEP ROCK LAKE.

Unique shape and picturesque appearance of the lake.

Following up the river Seine to the east of the Harold lake trail, one comes after a mile or two of paddling broken by two portgages to Steep Rock lake, a beautiful but tortuous sheet of water having something the shape of a capital M. The Seine river coming from the northeast enters it, after a fine waterfall, near the north of the second angle of the M; while Atik-okan river joins it through widespread marshes at the southern end of the first stroke of the M. The lake is well named, for bold cliffs rise at many points, sometimes to the height of one or two hundred feet; and since the rocks have great variety of color, white, reddish brown and green, the effect is very picturesque.

Geologically the shores of this lake are much more interesting and complicated than those of any other in the region ; since limestone, conglomerate, green schist and granite with dykes of greenstone are found strangely mingled. Groups of rocks on the shores of the lake.

The geology has been worked out somewhat elaborately by Mr. Henry Lloyd Smith [18] who visited it in 1891. The map of the Canadian Geological Survey does not give the details of the geology of the lake, probably because of its small scale.

Mr. Smyth distinguishes three principal groups of rocks on the shores of the lake, a basement complex, a Steep Rock lake series, and an Atik-okan series. According to Mr. Smyth the basement complex consists of granites and gneisses older than the other rocks ; while the Steep Rock lake series resting upon it has no less than nine well marked and persistent horizons, including conglomerates, limestones, schists and interbedded traps ; all bent into a horizontal sigmoid fold out of which most of the lake bed has been sculptured. The Atik-okan series consists of later granite porphyries and massive hornblende rocks.[19] The Basement complex is no doubt equivalent to what is generally called the Laurentian ; while portions of the Steep Rock series resemble Lawson's Keewatin ; though the limestones and conglomerates or breccias with a calcareous and ferruginous cement differ totally from any Keewatin rocks observed elsewhere by myself. The Atik-okan series seems to be partly Laurentian, using the word in a lithological sense rather than a historical one, and partly Keewatin or Huronian. Lloyd Smyth's classification stated and reviewed.

According to Mr. Smyth, the relationships of the three series of rocks are complicated by several faults as well as the folding mentioned.

Our observations, which were made rather hurriedly and before I was acquainted with Mr. Smyth's work, correspond very well with his as shown on the map accompanying his paper. We found the shores to consist chiefly of green schistose rocks or of granite, except at the two upper points of the M, and here and there along the northeast shore of the last down stroke of the M, where limestone and conglomerate with calcite were found. The map of the Geological Survey represents a tongue of Huronian as running along the northeast side of the second down stroke of the M ; but my observations prove that much of that shore consists of a whitish granite or protogine, though some small promontories consist of limestone. Probably the soft and easily weathered ferruginous limestone has been excavated to form part if not all of the lake bed. Green schists, granite, limestone and conglomerate.

A number of iron locations have been taken up along the lake, but the only indications of the ore which we saw were the rusty weathering of some of the impure limestone and a stretch of sand containing much brown hematite along the shore of the bay south of Elbow point, the central downward bend of the M. The limestone, parts of which are probably pure enough for lime burning, may prove of considerable importance if the region as a whole fills up, since this important rock is found in very few and limited areas between the Lake of the Woods and Port Arthur. Iron ore and

[18] Am. Jour. Science, vol. XIII, Third Series, 1891, pp. 317-331.
[19] Ibid., p. 319.

limestone

Since the greenish granite and its schistose modification are very much like the eruptive masses containing gold bearing veins at Harold lake a short distance away, as well as at Shoal and other lakes to the west, it would be worth while to see if this too does not contain quartz veins. The great dislocations and flexures reported by Mr. Smyth must have occasioned much fissuring, and thus have given a chance for the formation of veins.

A locality worth prospecting for gold.

From the southeastern extremity of the last narrow reach of Steep Rock lake there is a rough, precipitous portage into a small sheet of water, Margaret lake, sixty feet higher up, according to our aneroid, and another rough portage into a second, still tinier lakelet, the whole ascent amounting to about a hundred feet. Both lakes are bordered with coarse white granite containing bands of green schist, or perhaps dykes of diabase.

The portage from Steep Rock lake to Atik-okan river.

Fire has swept this part of the region, and the blackened tree trunks against the white and rugged granite make a wild enough scene. Many of the hollows between the granite ridges are largely filled with great angular or somewhat rounded boulders of the same rock, sometimes mixed with a little clay. No doubt the advancing glaciers pushed this debris into the lee of the more resistant knolls and ridges of rock.

From the southernmost lake there is a third of a mile's portage across the bare ribs of Huronian schist to the Atikokan. Just before this river is reached there is the most reckless descent down unclothed rock cliffs over which I have had the misfortune to portage. The canoes almost stood on their head going down, and great care had to be taken in picking one's steps not to get a bad fall for man and canoe.

It is said, however, that the river has such interminable windings, shoals and rapids between this point and its entry into Steep Rock lake that time and trouble are saved by following the crooked lake and scaling the three terrible portages. We found the drop between the last lake and the Atik okan to be forty-five or fifty feet.

From the Atik-okan to Lac des Mille Lacs.

Character of Atik-okan river.

Following up the Atik-okan, or Reindeer Bone,[20] as the name is translated, one finds that it is a stream having a decided character of its own. It is generally called a river, but had no claim to the title during my two visits to its waters, since in many parts it was scarcely deep enough to float our light-built canoes.

There is a short, steep portage over Huronian schist past a pretty fall soon after embarking on the creek, and this is followed by shallow, grassy stretches with considerable current, here and there interrupted by "riffles," or short rapids, up which the canoe must often be poled or dragged. Most of these rapids are over boulders, not solid rock, and much of the bottom of this part of the creek is of small, rounded boulders. Where the bottom is sandy or muddy, long trailing plants with thread-like leaves form a sort of

[20] Atik=reindeer, and okan=his bone, according to Barraga. By some it is translated reindeer horn, but the Chippewa name for horn is eshkan.

carpet of wavy green mermaid's hair, tangling the paddles and encroaching on the depth of water needed for the canoes.

Most of the shore as far as Sabawe lake was swept by fire last year and is now desolate enough.

Iron locations on the river.

Along this part of the river and beyond Sabawe as far as Whiskey Jack lake the Huronian (Keewatin) schists contain more or less magnetite, and sometimes display ruddy brown walls of iron-stained rock at a little distance from the shore, but the immediate shore is generally swampy. Most of the north shore and some of the south has been taken up as iron claims; but nothing further need be added to the description given in last year's report.[21]

The Sabawe and Magnetic lake sections.

Sabawe lake, unlike many others in the region, is dammed by loose materials, and two-thirds of the way up is almost cut in two by a long spit of sand. Below this its waters, like those of the river, are brown and rather turbid; but above it they become clear. Between Sabawe and Magnetic lake the valley is wide and flat, consisting chiefly of muskeg and marsh, with a few islands of Huronian rock rising above the general level; and the low banks of the creek are of clay, proving that the whole was once a lake, now almost wholly silted up. A little further lowering of the drainage level would provide wide flats of most fertile soil.

A break in the Huronian tract on Whiskey Jack lake.

At the entrance to the narrow expansion of the Atik-okan, named from a well known bird of the northern forests Whiskey Jack lake, one finds a reddish gray rock which turns out to be augite syenite or syenite gneiss, apparently Laurentian, and granitic-looking rock is to be seen wherever rock is exposed on the shore of the lake; so that a small area of Laurentian or perhaps of eruptive granite rock here interrupts the Huronian.

Through lakes and across portages into a Laurentian region.

On the rather long and steep portage by which Magnetic lake is reached the rock is again Huronian, and its shores and those of Crooked Pine lake seem to be of the same character, though on the southeast side of the latter small rounded granite boulders appear on a strip of sandy beach.

A short portage south from Crooked Pine lake crosses the watershed between the system of waters flowing into the Seine, and after a small and apparently nameless lake, another portage leads south to Elbow lake, whose southern end lies within the Laurentian. Once more there are two portages with a small lake between, leading to lake Windigoostigwan. The first or more northerly of these two portages, though not long, is over very bouldery ground, and huge perched blocks of granite stand out against the sky on the bare, fire-swept ridges of Laurentian rock. The more southerly portage is perhaps half a mile long, at first up a steep clay bank excessively slippery in the rainy weather we encountered; afterwards over rich looking soil or great boulders, with Laurentian rocks showing here and there.

Following the Dawson route to Savanne.

From this point we followed the old Dawson route, portaging into Baril lake and then into the southwest arm of Lac des Mille Lacs. As the whole distance is apparently through Laurentian rocks, and as the time allowed for the trip was nearly up, we made what haste we could and did not delay for geological work.

[21] Fourth Report Bureau of Mines, p. 75.

Half way up Lac des Mille Lacs however we were wind-bound for a day and were obliged to camp on a long point of drift material on the north shore. Savanne was reached on August 12th.

From Savanne a telegram was sent to Mr. Blue, Director of the Bureau of Mines, who had reached Fort William on the way to join us for the remainder of the summer's travel. A day or two of delay gave an opportunity to visit the Indian village on Poplar Point, ten or eleven miles from the station at Savanne. As this village was afterwards visited by Mr. Blue, who will report on the general features of the country traversed on his way to Fort Frances, it will be unnecessary to do more here than to refer to some geological points. The whole region about Savanne is a great muskeg, or peat bog, more or less covered with stunted spruce, but showing no outcrops of rock along Savanne river. Just beyond the mouth of the river, which enters Lac des Mille Lacs two or three miles below the station of the Canadian Pacific Railway, granite and gneiss show themselves; but Sand Point, to the southwest, as its name indicates, is formed of drift. Cliffs of stratified crossbedded sand rise twenty or twenty-five feet above the lake, sometimes accompanied by pebbles and boulders, the whole consisting probably of glacial materials rearranged by the waters of a deeper lake than the present one. No polished or scratched boulders suggesting unworn rock fragments brought by direct glacial action were seen. Among the pebbles were chips of jasper much like some collected earlier in the summer at the Hudson Bay post on Lonely lake.

Geology of the region about Savanne.

On the face of the sand cliff, two and a half feet below the top, a bone was seen projecting at one point, and a little digging disclosed a tolerably complete Indian skeleton. With it were found fragments of a well made earthen pot with some red ochre, but no arrowheads nor axes. The body had probably been buried in a sitting posture, since the skull rested on the ribs and leg bones. A hole in the skull perhaps indicates a violent death.

Aboriginal remains.

Round Lake and the Huronian Mine.

On August 14, having been joined by Mr. Blue, we set out for a visit to the Huronian mine, engaging a guide at Savanne, since neither of our half-breeds had been over the route. A large bark canoe was secured to carry the addition to the party.

Savanne to lake Shebandowan.

Against strong head winds and a very disagreeable sea we made our way south on Lac des Mille Lacs to the foot of its large southeastern bay, where a mile's portage over an unusually good road leads across the watershed to Kashabowie lake, which empties by a short river with numerous falls into lake Shebandowan.

At the last island to the south of Lac des Milles Lacs we found that the Laurentian rock, forming most of the shore of this lake, gave way to a Huronian conglomerate, and Huronian schists show themselves at the north end of the portage. On a small lake to the south and from that to a point near the south end of Kashabowie lake we saw nothing but Laurentian

granite and gneiss. Near the foot of this lake there is a breccia of gigantic gneiss blocks cemented by strips of granite.

There is another long portage between Kashabowie lake and lake Shebandowan, and on camping at its southern end we were fortunate enough to find Mr. James Hammond's exploring party, now on its way home after a hard summer's work to the south and west of this point. Probably no one is better acquainted with the region than Mr. Hammond, and Mr. Blue and I were much pleased to have him serve as guide in the two short expeditions which we made, one to the Huronian mine, the other to the iron deposits of Greenwater lake and the Mattawin river.

As these expeditions promised to be somewhat arduous it was decided that a portion of the party should remain in camp at the southern end of the portage, while Mr. Blue, Mr. Burwash and the writer with Mr. Hammond and three canoemen should push on to the Huronian mine.

As it is Mr. Blue's intention to describe the routes followed, it will be necessary here to touch on the geological and mineralogical features of the country only.

Owing to the limited time left for the visit to the Huronian mine no detailed observations were made on the southwestern end of lake Shebandowan, though rock having the appearance of Huronian was observed on the way; nor was there any delay in crossing the portages and small lakes between Shebandowan and Round lake. On the shores of the latter lake a number of locations have been taken up and a few hours were employed in visiting and examining some of these.

MINING LOCATIONS AT ROUND LAKE.

A fahlband of Huronian schist east of the lake.

Just east of Round lake is the Tip Top mine, K65 and adjoining locations, in which Mr. Hammond and others are interested. Where we visited it the deposit may be described as an extensive fahlband in the Huronian schist, having a width varying from one hundred to five hundred feet, and extending for perhaps half a mile. On each side of this great mineralized bed one finds green Huronian rock, sometimes containing a little pyrite. Near the green schist the much decayed rock of the bed, partly talcose and partly a green rock like graywacke, is heavily charged with sulphides, iron pyrites, copper pyrites and some pyrrhotite; the copper pyrites sometimes in nearly solid beds. The central part of the great bed consists partly of bluish quartz with some pyrites, and also a green silicate. These minerals are sometimes associated with what seems a fine grained eruptive rock, perhaps gabbro. Samples of the sulphides and also the green silicate are reported to have been assayed by Dr. Goodwin and Messrs. Hille and Hayes, and to have contained some nickel (less than one per cent.) and a little cobalt; as well as gold from nothing up to $4.00 per ton. An assay of the green silicate made in the laboratory of the School of Science, Toronto, gave no evidence that nickel is present.

The copper contents of this great fahlband should pay well to work when there is better communication with the world.

Gold bearing porphyritic rock on the northwest shore of the lake.

The shore of Round lake at the end of the portage sweeps as a long curve of sandy beach; but a point to the northeast consists of gray porphyrite, and a bay stretching to the north is said by Mr. Hammond to lie in the granite. On the northwest shore of the lake several locations have been taken up on a large eruptive mass rising steeply out of the water into rounded hills. Very stormy weather and the shortness of the time at our disposal made it impossible to do more than examine a few points on the shore of this eruptive mass. It had been described as quartzite, but of the several specimens of the rock taken by myself, some pale greenish, others purplish, none turn out to consist of quartz. The freshest specimen, from R559, is a well defined quartz porphyry, while the others are felsitic in look and are probably sheared porphyries. They are all more or less impregnated with pyrite and chalcopyrite; and at some points a little fluorite is found.

Assays of this material, made by Mr. Hille of Port Arthur, give gold from nothing up to $7 per ton. One assay yielded half an ounce of platinum and eleven ounces of silver, with no gold. Three specimens of rock taken by myself from the shore, without selection of the most promising portions, were assayed in the laboratory of the School of Science and yielded from a slight trace up to $2 per ton of gold. No platinum was obtained. If this immense body of rock should prove to contain even three or four dollars per ton of gold on the average, it should be capable of being worked at a profit, since the rock can be quarried in unlimited quantities.

The southwest shore.

The point on the southeast side of Round lake was found to be grayish green Huronian schist, with a strike of 50°, so that the porphyry and porphyrite on the northern side of the lake appear to be between the green schist and the granite.

Cross lake and Jackfish lake.

The next body of water is Cross lake, which has altered quartz porphyry and felsite or sericite schist on its northeast shores, with a strike of 40°; and flesh red Laurentian rock at the southwest end. Similar red granite or gneiss is found on Jackfish lake, where the road runs west to the Huronian mine.

THE HURONIAN MINE LOCATION.

Country rock and ore of the mine.

The rocks observed at the Huronian mine itself are talcose slate, chlorite schist and altered porphyries. These rocks are sometimes charged with sulphides, and contain stringers of quartz five or six inches wide containing galena and copper pyrites.

There are two shaft houses beside a ravine, a mill fitted with rock breaker, ten stamps and three Frue vanners; there are in store materials such as common and fire bricks, carboys of acid, barrels of salt and manganese dioxide, evidently intended for a chlorination plant.

Organization of the company.

The company was first organized under the name of the Jackfish Lake Mining Company, under the Ontario Joint Stock Companies' Letters Patent Act, 1874, and the patent of incorporation being dated the 22nd of May, 1875. The capital was $600,000, in 60,000 shares of $10 each, and all the shares were reported as fully paid up. The directors were: William Bell

Frue of Detroit, president; J. J. Vickers, of Toronto, vice-president; John McIntyre of Fort William, and A. J. Cattanach of Toronto, with Nicol Kingsmill of the same city as secretary-treasurer.

The following description of the property was given in a report by Walter McDermott, formerly assayer of the Silver Mining Co. of Silver Islet:

"In the winter of 1872-73, in company with Captain Frue, I visited the Jackfish location, which is situated about 85 miles west of Thunder bay, lake Superior.

Walter McDermott's report on the location.

"The gold-bearing vein, on which some little work had then been done, is situated on one side of and running parallel with a narrow valley formed by walls of granite on the one hand and greenstone on the other. The vein itself rests on the granite wall, but with an interposing thin belt of talcose slate preventing actual contact. For several hundred feet on both sides of the principal working the vein has been traced, but as the period of my visit was mid-winter, with its customary heavy covering of snow, my personal observations were confined to the points at which work was actually in progress. At different points of the principal opening the vein varied in width from two to seven feet, and consisted of quartz with occasional patches of yellow magnesian spar. The minerals contained in the gangue were principally copper and iron pyrites, light-coloured zincblende, galena, and with varying small proportions of free gold and sylvanite (telluride of gold and silver). The sulphurets appeared from a number of assays to carry always a small though variable quantity of both silver and gold, the two metals maintaining a pretty constant relative ratio; and occasional streaks of the mixed sulphurets, differing but very slightly in appearance from the bulk of the mineral, yielded quite richly on assays. The occurence of the free gold and sylvanite, generally though not always in conjunction, was irregular but not infrequent, for during the three days I remained on the spot several separate blasts developed rich portions of the vein from which many very fine specimens were obtained, showing free gold in strings, spangles and small nuggets and streaks, coatings and small masses of the extremely valuable sylvanite ore. This sylvanite was first mistaken by the miners for silver glance, but assays and analyses proved it to be the true telluride of gold and silver, some samples of the sulphurets through which it was mixed yielding on assay up to $4,000 per ton in gold and silver, chiefly the former. From some few barrels of the ore taken to Silver Islet, 123 lb of rock was selected and sent to Balbach's smelting works in New Jersey, the works returning as a result a small brick of silver and button of gold, weighing respectively $5\frac{1}{2}$ and 1.16 oz. Of course it is not to be supposed that so high a result represents the average of the rock; nor does it any more represent the best that could be obtained, since a little more rigorous selection of the sample sent could easily have made the latter yield double or quadruple the percentage of gold and silver, as any person will understand when it is understood that many samples could be selected carrying free gold alone, or with the rich sylvanite.

Metallic constituents of the gangue.

"A road has been cut through the woods a distance of 12 miles, and connecting the mine with lake Shebandowan, and thereby with the Red River

road to Thunder bay, the route of the Pacific railroad branch at present in process of construction. The immediate neighborhood of the mine is heavily timbered, the trees being of good growth and various qualities, offering everything in the way of timber supply for mining purposes. The occurrence of the soft talcose slate on a hard wall is very favourable for the breaking out of the vein, and leaving a good wall requiring hardly any timbering."

John W. Plummer, now a well known mining engineer in the western States, made the following report to Mr. Frue under date of 20th October, 1875 :

John W. Plummer's report.

"I beg to hand you a short report of our explorations at the height-of-land gold properties, showing the result and extent of our operations at Jackfish lake location, or H1. Taking this location as our starting point, my attention was directed to a vein situate about the centre of the location, on which some work had been performed. This vein, which is the chief of those

Huronian mine.

discovered, is from three to four feet wide, composed of lead and copper in a gangue of quartz, with well defined walls lined with talcose slate. Its bearing is about N. 50° E. The opening on the vein at this point by former explorers yielded a quantity of native gold. We put in several blasts, nearly all of which yielded free gold. The vein is traced with ease to the south-westerly limit of the location. At an opening made some 20 chains from the first the vein shows itself moderately rich in copper and lead, but no visible gold. In the northeast end of this location the vein is divided, but such portions as were found were full of mineral. By developing this property at the first opening the divided portions of the vein can be traced with greater accuracy, and with every prospect of success.

Highland mine.

"Highland Mining Company, or H2. This location lies to the south-west of H1. The vein passes through the whole of its length diagonally. Several openings have been made. A quantity of iron pyrites is now seen in the vein, associated with a small quantity of copper and lead. No free gold is visible; but samples from various pits, both here and elsewhere on the vein, showed when assayed gold in more or less quantities.

Neebish mine.

"Neebish Mining Co, or H3. This location lies to the northeast of H1. The vein, which carries itself so well through H2 and a portion of H1, is here hard to find, and is apparently divided into smaller branches, which will unite probably in depth, or some point further to the northeast.

Shebandowan locations.

"Shebandowan Gold Mining Company's property. This property includes locations lying to the northeast and southwest of H1, 2 and 3. Those lying to the extreme northeast I did not examine, my time being occupied in tracing the Jackfish vein through the southwest lots; and starting from the south-west limit of H2 the vein is traceable for a long distance, some two miles. It appears at every opening much the same as on H2 (auriferous quartz, small quantities of iron pyrites, copper and lead). This vein is exceedingly uniform in all its peculiarities throughout its length. On H8 and H7 two other veins were discovered, one on each side of the main vein and parallel to it. One of these veins is pretty well defined; the other irregular and massive. Several small branches and veins have also been found both in this and the other properties.

"I think on the whole our explorations have been to a certain extent satisfactory. They have proved the existence of a vein of great length and vitality, carrying throughout more or less gold, visible and invisible. It also proves the existence of other veins which, under development, might prove as rich if not richer than those already opened. General conditions.

"The facilities for working are pretty favourable. Large belts of timber can be obtained quite close along the course of the vein; water for concentrating and other purposes can be obtained at a small expense; and communication with the Canadian Pacific Railway (according to their present programme) can be effected by 12 miles of land transportation.

"In conclusion, I think with a great many that you have at Jackfish lake and neighbourhood a property of great value, and well deserving the attention of capitalists."

Following is an extract from the report of Peter McKellar of Fort William under date of March 15th, 1877:

"The location is half a mile square, covered with small pine, spruce, tamarack, poplar and birch, suitable for mining purposes in general; and large pine can be got from the north, patches of which the road to Baril Portage must pass through. The surface is undulating rocky, the lower surface being covered with deep mossy accumulations and the higher parts mostly with sandy soil, which when cleared would produce fair crops of hay, oats, potatoes, etc. Near the vein runs a small stream, admirably suited for supplying the stamp mill with water. Peter McKellar's report.

"The vein passes diagonally through near the middle of the property, traversing the Huronian series, which here consist of highly inclined greenish slaty strata, partly displaced in the vicinity by intrusive granite. Professor R. Bell, in his report of the mineral-bearing rocks of lake Superior, which appeared in the Globe, March, 1874, states: 'The gold of British Columbia and other regions occurs in rocks similar to those of the Huronian series.'

"I have examined the vein at various points for a distance of about 2,000 feet on this property, and about 1,200 feet on the adjoining Highland mining location; and I see by Captain J. Plummer's report that he traced it westward on the Shebandowan mining property for two miles further, which proves it to be a vein of great strength. As far as my examination went it appeared richer on the Jackfish lake property than on any other. The mining test of the vein was made on this location the winter following its discovery, five miners having been engaged for nearly a month. Two openings were made; one near the western boundary, the other about the centre of the property. At the latter place a depth of about 10 feet was sunk on the lode. Ore to the amount of about 100 tons was excavated. I was there while the work was in progress, and I can truly state that the more it was opened out the higher it rose in my estimation, and the opposite is the case almost invariably with poor mines.

"This vein like others is subject to contractions and expansions. The average width appears to be four to six feet, though in places much larger. It consists of two nearly equal parts: the one (generally in the middle) a soft

talcose slate, charged with iron pyrites, and carrying some gold ; the other quartz and some bitter spar, charged with galena, iron and copper pyrites, sulphide of silver and free gold, with occasionally small bunches of auriferous tellurium. The gold and silver are in general finely disseminated through the quartz and other ores, but here and there specimens are found that would yield $2,000 to $3,000 per ton. Captain Wm. B. Frue had the precious metals extracted from 126 lb. of selected ore, the average yield being about $500 to the ton, or gold $460, silver $40."

As our visit to this famous mine was a hurried one without a guide familiar with the workings, and the shafts were full of water, it was impossible for us to do much more than examine and bring away samples of the country rock and the ores. The ore on the dump is very striking and handsome, white quartz plentifully sprinkled with copper pyrites, iron pyrites, galena and some zincblende. Small quantities of telluride may be found also. An assay of some ore taken by myself gave ten dollars in gold and nine ounces of silver per ton.

Dr. Selwyn's opinion of the property.

Dr. Selwyn, when Director of the Geological Survey of Canada, stated that he considered the Jackfish Lake or Huronian mine the most promising mining venture he had seen in this region. "The lode is well defined and can be traced for a considerable distance to the southwest with an equally promising character, though yet undeveloped." [22]

As the Huronian mine was one of our pioneer gold mines, carried on for some time in the face of great obstacles, and as it and the Highland and other properties may be of importance in the future, it has been thought wise to quote somewhat extensively from various reports made upon it at the time it was opened up.

Recent discoveries near the Huronian.

Several locations have recently been taken up by Mr. James Hammond to the southwest of the Huronian mine. Specimens from some of these properties contain free gold and also sylvanite. Owing to lack of time we did not visit them, but returned to our camp on lake Shebandowan.

Copper ore on lake Shebandown.

Before setting off for the Mattawin iron deposits a visit was made to a point east of location ON3, on the shore of lake Shebandowan, southeast of the camp at the end of the portage. Talc schist, striking about east and west and with vertical dip, is here heavily charged with iron and copper pyrites for a width of twenty-five feet. At some points the copper pyrites forms almost solid masses. An assay of the pyrites gave only a very slight trace of gold, but the ore should be of value for its copper contents.

The Mattawin Iron Region.

An excursion to Greenwater lake and Mattawin river.

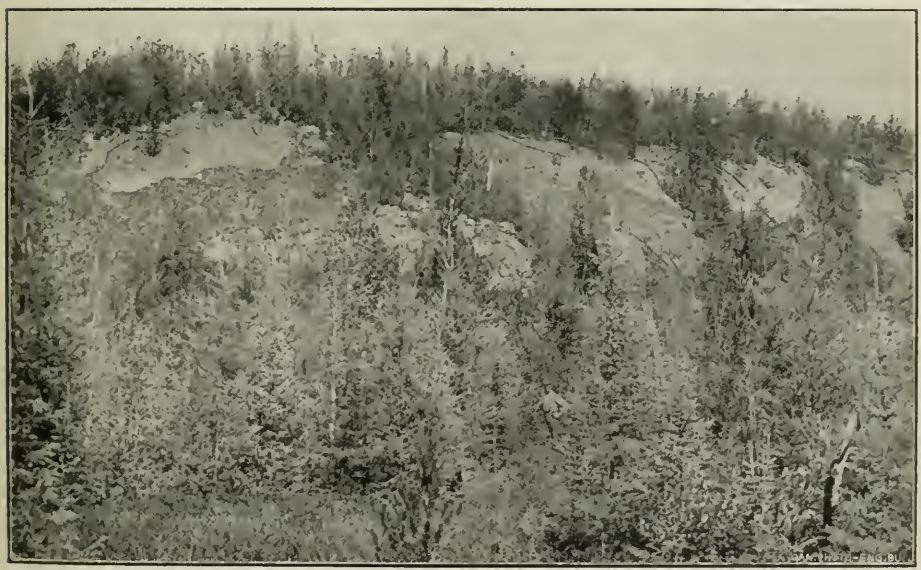
Leaving Mr. Burwash and the rest of the party to examine the geology of the country between lake Shebandowan and Savanne, Mr. Blue and myself with Mr. Hammond and three canoemen set out for the iron region of Greenwater lake and Mattawin river.

[22] Geol. Sur. Can. 1882-3-4, p. 2.

Eighth Falls up Seine river, p. 68. From a sketch in Indian ink by Dr. A. P. Coleman.

Fort Frances in 1857, p. 161 Reproduced from a sketch by H. Y. Hind.

Falls on Atik-okan river below Magnetic lake, p. 141. From a photograph by Dr. Robert Bell.



Iron Mountain on Atik-okan river, p. 141. From a photograph by Dr. Robert Bell.

Portaging south into the small lake, Loch Earn, we found Huronian rocks on its north side and red granite on the south. On the latter side some one has dug a trench, apparently to find the source of some boulders of quartz with copper pyrites ; but so far as seen, the bottom of the deposit of boulders, doubtless of glacial origin, was not reached ; and it is very doubtful if the mineralized quartz came from the immediately underlying granite. On Loch Earn.

Another portage leads south into the charming Greenwater lake, on whose southeast shore several iron locations have been taken up. A visit was made to location R526, near the lake, where green hornblendic schist was found with a strike nearly north and south and dip not far from vertical. Interbedded with the schist are bands of very fine grained magnetite, mixed with a little hornblende. The beds of ore are often finely contorted, and the width of the part rich in magnetite is forty-eight feet. The country rock to the east is hard, very fine grained green schist; and to the west a porphyroid containing quite large hornblende crystals, followed by green hornblende schist. Mr. Hammond states that this ore body may be traced for miles with varying width, and that five locations have been taken up in all. The ore, so far as we observed, is free from sulphides. Iron locations on Greenwater lake.

This or an adjoining location was visited by Mr. W. McInnes, of the Canadian Geological Survey, in 1892, and a specimen which he collected afforded when assayed in the laboratory of the survey the following results :[23]

Metallic iron	52.82 per cent.
Insoluble matter	22 31 "
Titanic acid	none.

An assay by Mr. Hille of Port Arthur gave similar results ; iron 53.33 per cent., phosphorus 0.055 per cent.

The quantity of ore available near Greenwater lake must be very large, and it seems free from objectionable ingredients, but not very high in metallic iron. It is a softer ore than that of the Atik-okan.

At Long Point lake, east of Greenwater lake, dark green serpentine is found associated with magnetite.

A series of rivulets, marshy ponds and bad portages leads easterly to Copper lake, where rock is once more seen at a contact of Laurentian and later rocks, coarsely porphyritic syenitic gneiss on the north side of the lake and finely banded slaty rocks and schist with a strike of 130° and steep dip on the southeast side, at the portage. The slaty rock has scarcely the look of the usual Huronian. The outlet of the small lake is over a wall of slate forming a pretty cascade immediately after the stream leaves the lake, a proof of the very modern geography of the region, since the outlet has not yet been appreciably lowered. On Copper lake.

A long portage leads into Hawk lake, where granite is found.

GOLD CREEK.

Ascending Gold creek from Mattawin river, granite is exposed at one or two points not long before reaching the head of canoe navigation at what has Gold locations on Gold creek.

[23] Geol. Sur. Can. 1892-3, pp. 25A and 37R.

been named the Quartzite mine; but above this the rock is a gray, fine grained schist, often considerably charged with sulphides and now and then containing small veins or irregular masses of quartz. As a number of gold locations have been taken up on these rocks an afternoon was spent in examining them. The banks of the creek were followed for about a mile from north to south and excursions made to each side. At several points the rock has been stripped and pits have been blasted out in four places, while at one point the face of a cliff has been blasted away and a few feet of drifting done. Much of the rock is charged with iron pyrites, and any gold carried by the rock comes probably from this mineral. The rock, which is almost always distinctly schistose, varies much in strike and sometimes appears to have two distinct cleavage directions; in one instance 120° and 35°. Microscopic examination proves that this rock is not a quartzite, though generally very siliceous, but usually a hälleflinta or microgneiss. One portion looking much like quartzite, but having little or no cleavage, may be described as a felsite perhaps. Our examination covered parts of AL61 to AL65. This rock as a whole is said to run a few dollars in gold to the ton. Three specimens selected by myself from different points as average examples were assayed in the laboratory of the School of Science, Toronto, and yielded each a trace of gold, less than a dollar per ton; but it may be that specially selected samples would be much richer. It is probable that rock occurring in such limitless amounts and so easily mined would pay to work on a large scale, such as that of the Treadwell mine in Alaska, with an average gold contents of not more than $3.00 or $4.00 per ton; but our assays show much less than that amount.

The hälleflinta of this region, though probably Huronian, differs greatly from the typical rocks of that age. It shows some likeness to Dr. Lawson's Couchiching as found occasionally on Rainy lake, but is harder and finer grained.

MATTAWIN IRON RANGE.

Mattawin hematite deposits.

Turning eastward and northeastward from the Quartzite mine, we traversed on foot a level, comparatively dry country for eight miles before reaching the Mattawin hematite deposits, which rise as sharp, elongated hills. There are eight of these hills in the Mattawin Iron Co.'s locations, the eighth, on location W222, being the most westerly and the first, on location W211, the most easterly.

Mr. Blue and I visited hills No. 8, 7, 5 and 1, the first two being north of the Mattawin and the last two south of it.

Hill No. 8.

On hill No. 8, which rises steeply above the valley, the ore is fine grained and purplish gray to red with a few seams of red jasper, the richest ore apparently lying close to the jasper. The country rock on the south side of the hematite lens, which has a strike along the cleavage of about east and west, and a vertical dip, is soft, dark gray slate; and on the north side a very fine grained greenish gray schist, or glistening slate, which would be called a phyllite by European petrographers. It is prob-

able that these rocks are later than Huronian, and are equivalent to the Animikie.

One or two pits have been sunk on this hill, disclosing a large amount of fair ore. The width of hematite is four hundred feet and the length of the lens about a quarter of a mile.

Hill No. 7. Hill No. 7 on W221 rises a hundred and eighty feet above the valley, as shown by aneroid, and contains a variety of ores, some grayish red and somewhat mixed with rock matter, other parts "blue" ore associated with a dark cherty material. The strata are very contorted in places, and the strike about 110° at a point where a diamond drill has been used for exploratory purposes. The greatest width of ore, with some stony bands, is four hundred and eighty-five feet, and the length about fifteen chains. Some specimens of the ore are said to assay fifty-five per cent. iron.

Hill No. 5. Crossing the Mattawin river we visited Hill No. 5, on its southern bank, where a band of blue black, somewhat magnetic ore is found, having a strike of about east and west and a dip of 80° to the north. On the south side of the ore band a gray, spotted slate, like the *Knotenschiefer* of the Germans, is found. The width of more or less pure ore is fifty feet, and it is said to extend for a quarter of a mile.

Hill No. 1. Hill No. 1, on location W211, displays a quite different ore from any of those hitherto mentioned. A shaft has been sunk near the summit to a depth of fifty-six feet, and the material taken from it is a handsome jasper breccia, resembling specimens from parts of the Vermilion range, Minnesota. Large fragments of banded red jasper, or less often of black chert, are cemented with very fine grained magnetite. The proportion of iron ore increases as the shaft goes down, but solid ore had not been reached when the work was abandoned.

Analyses. The following analyses of Mattawin iron ores were made by Dr. Goodwin in the laboratory of the School of Mining, Kingston, and are published by the kind permission of Mr. J. Bawden, secretary of the company.

	I.	II.	III.	IV.
Iron	68.47	63.550	51.320	60.49
Sulphur	none	0.044	0.700	.....
Phosphorus	none	0.014	0 046	0.08
Titanium	.....	0.021	.....	.....
Silica	.....	.....	19.59	.....

The last analysis is of ore from Hill No. 8, but the localities from which the other specimens were taken are not mentioned, nor is anything said as to whether they are picked or average samples.

General promise of the range. Looked at as a whole, this region contains immense bodies of ore, hematite and magnetite, not very high in iron, but generally free from sulphur, and so placed that mining operations would for a long time consist simply in quarrying. The country is well suited for railway building, so that a short branch line connecting with the Canadian Pacific at Finmark, or with some point on the Port Arthur, Duluth and Western Railway, could be built inexpensively, affording an outlet to lake Superior.

From the Mattawin river to Finmark on the C.P.R.

The Mattawin river runs much of the way through alluvial clay and well stratified sand. Its bottom in many places is covered with boulders making canoe navigation very troublesome at the shallow water season.

Turning aside from the river toward Finmark station, Huronian rock is met once more a short distance south of the railway, a number of stringers of quartz with pyrite occuring in gray-green somewhat chloritic schist.

A striking feature in the surface geology of the Mattawin region is the absence of lakes. From hill No. 7, for instance, a view extending miles in all directions discloses no lakes, and but few streams or swamps, a feature that interferes with communication by canoe, but greatly favors railway construction.

Jackfish Bay and Silver Islet.

Empress mine.

On August 23rd, having seen Mr. Blue off on his canoe trip to Fort Frances, we took a train for Fort William. After visiting Port Arthur in order to obtain some information from Mr. Hille and other gentlemen, we embarked on the tug Salty Jack, August 24, to visit the Jackfish Bay mine, the tug having been chartered by the Messrs. McKellar to take a party of men with provisions, etc., to open up this property. I wish to express my gratitude for the kindness and hospitality of the Messrs. McKellar toward us during this visit to their location.

Jackfish bay is a well sheltered harbor one hundred and twenty miles northeast by east of Fort William, and the straightest course, passing a series of magnificent promontories and islands, many of them capped with flat sheets of diabase, leads through the open lake exposed to a heavy sea from southerly points. The Jackfish bay station on the Canadian Pacific is near the mouth of the harbor, not far from an island which cuts off the swells from the open lake. Here the railway turns toward the north and makes a detour of some miles with heavy rock cuttings and a tunnel before returning to the lake shore and continuing its course westwards. The scenery is very bold and striking. At the station red syenite shows itself, sometimes enclosing fragments of dark schist, which rock is found a little beyond the station on the hills. At the tunnel on the west side of the bay gray or pale flesh colored granite has been pierced and rises as a cliff above the water. At three points it is penetrated by black dikes of diabase, well seen from the water. One of the dikes is sixty feet wide. The microscopic characters of these rocks will be discussed in the petrographical portion of the report.

Dike in granite. Jackfish bay.

Three-fourths of a mile west of the tunnel a small quartz vein is found in the granite. Some years ago, as Mr. McKellar reports, rich gold specimens were obtained from it; but there was not enough quartz to justify mining it.

THE EMPRESS GOLD MINE.

The Jackfish or Empress mine was discovered two months before we visited it, by an Indian who brought in specimens of quartz to the Messrs. McKellar. It lies about two and a half or three miles inland from the head of the bay, and the trail ascends five hundred and eighty feet in that distance, as measured by aneroid. On the way four small but pretty lakes are passed at different levels. The area of granite extends about two and a quarter miles inland, when gray and green schists, no doubt Huronian, make their appearance. The vein was only partially stripped at the time we visited it, but appeared at its highest point to be forty feet wide, some strips of talcose or sericitic schist much impregnated with sulphides being included with the quartz, so that there would not be more than half that width of solid quartz. The vein had been traced, we were told, for nearly a thousand feet. It is apparently of a bedded or segregated character, with a strike of 70° and a steep dip, and has hard green hornblende schist on the northwest side, and softer hornblende-chlorite schist on the southeast. Vein of the Empress mine.

The quartz contains much pyrite, some chalcopyrite and galena, but we saw no free gold, though it is said to pan well. Since our visit much more development has been done and some specimens rich in free gold has been shown me as coming from the mine.

An assay of a specimen of ore taken by myself gave $10.60 in gold and silver. If the ore will average that, the mine should be very valuable, for the quantity of quartz must be very great. It is to be hoped that the McKellars and their enterprising fellow citizens in Fort William and Port Arthur who have provided the capital for opening up and working the property will be well rewarded for their venture.

It is perhaps worthy of mention, as showing how the vast body of cold water in lake Superior affects its northern shores, that raspberries and blueberries were just ripening, and that strawberries were still on the vines on August 26th. Blueberries were begining to ripen on the north shore of Lonely lake, a degree and a half further north, on the 15th of July. Late ripening of wild fruit on the north shore.

SILVER ISLET.

Returning by the Salty Jack, we had a calmer passsage and stopped some hours at Silver Islet, a few miles east of Thunder bay. Mr. J. W. Cross, who is now in charge of this once famous mine, was good enough to serve as guide to the stamp mill, in the village of Ryanton on the mainland, and to the works on the island itself. Silver islet mine and works.

The district as a whole consists of fine-grained, gray Animikie slate, here and there pierced or capped with outflows of diabase, the flat-topped hills to the north being covered with sheets of this rock. The islet itself, once only seventy by forty feet in dimensions, has been enlarged with cribwork filled with rock from the shaft until there is room for several buildings. The materials dumped from the shaft, thirteen hundred and fifty feet in depth, to fill the cribs have in some places been washed by the waves so as to form a

beach on which fragments of gangue are being rolled to well rounded pebbles. Some of these pebbles are rich with native silver.

The dump has been many times picked over, but still affords interesting specimens. We found, besides native silver, argentite, chalcopyrite; marcasite, blend and galena, with calcite and quartz as gangue minerals. Part of the ore on the dump consists of a breccia of diabase cemented with carbonates containing sulphides.

The Silver Islet ore was specially rich where the vein cut a dyke of eruptive rock, which is exposed at a point or two on the islet. Under the microscope this proves to be a diabase or quartz diabase, differing in character from the diabase on the mainland, and of coarser grain.

Edward's island.

From Mr. Cross I obtained a specimen of native arsenic from Edward's island, nine miles east of Silver Islet, where it occurs with a silver ore; and it is evident that the region is rich in interesting minerals, It seems hardly probable that the Silver Islet vein, from which $3,250,000 of silver was produced between 1870 and 1884, is the only rich vein in the region, though, up to the present, no others have proved to be more than pockets.

Returning to Fort William we took a steamer for Windsor, where the salt works were examined, and reached Toronto on August 31.

General Conclusions.

Extent of the gold-bearing region.

As a result of the past summer's work in western Ontario, it may be stated in general that gold has been found either in visible particles or by assay in a stretch of country reaching from near the Manitoba boundary on Shoal lake eastwards to the Quartzite mine near Finmark station, a distance of two hundred and sixty miles; and over a breadth of one hundred and twenty or thirty miles, from Minnietakie lake to the south shore of Rainy lake. It is not to be supposed of course that gold in paying quantities will be found everywhere within this area of one hundred and twenty by two hundred and sixty miles; for probably two-thirds of this territory of more than thirty thousand square miles is Laurentian, which has never proved to be auriferous except near the margin of the Huronian. It is not even to be taken for granted that every stretch of Huronian rock in this area is auriferous, though in most cases where exploration has been thorough, gold has been found in traces, if not more abundantly, in veins from the Huronian of almost all parts of the field.

Interesting features of the field.

Two points have struck me forcibly during the summer, one the frequency with which true fissure veins bearing free gold have been found in or near masses of eruptive granite which have burst through the Huronian schists; the other that at two points immense bodies of schist impregnated with sulphides, i.e., fahlbands, have proved auriferous, and in one instance a hill of porphyry of great extent shows the same feature.

Altered granites or protogine areas, with gold-bearing veins.

Looking first at the occurrence of gold in granitic rock, we find that in general the granite forming the country rock for gold-bearing fissure veins is apt to contain a considerable amount of plagioclase and to be modified by

shearing and weathering into a greenish rock, often called protogine, in which the mica or hornblende of the original granite is changed into sericite or chlorite. Generally the change has gone still farther at the immediate edge of the vein, the felspar being changed to sericite and other products, the rock taking on the look of a schist, probably as a result of faulting when the fissure was formed and of the action of circulating water during the filling of the vein.

Examples of the sort are found at Bunn and Scovil's vein on Bag bay, Shoal lake; at the Regina mine on the Lake of the Woods; at Foley's and other properties on the river Seine, and at Harold lake and Sawbill lake toward the eastern end of the gold field. Several other less important examples of the same character have been found, such as the Little Canada and Partridge lake locations.

As these deposits in granite are usually true fissure veins with well marked walls, and as the granite itself is in all probability simply the projecting surface of a profoundly thick mass, there is no reason to suppose that such veins will not prove to extend to great depths; though up to the present the deepest shaft sunk upon such a vein, that on the Foley property near Shoal lake, has gone down only to the depth of two hundred feet. At that depth there is, according to reports received, no sign of pinching out. Veins of this sort are now being worked with every prospect of success, and gold is being won from their ores at the Regina mine and at Harold lake; and there is reason to think that at least two other veins of the same kind will be worked during the coming year.

Gold-bearing schists, porphyries, etc.

Turning next to the wide diffusion of gold in schists and eruptive rocks, three examples were studied during the summer, the first on Minnietakie lake, twenty or thirty miles northeast of Wabigoon Tank on the Canadian Pacific Railway, where toward the southwest end the shore for long distances consists of schist charged with iron and copper pyrites. Every assay made of rock from this shore showed traces of gold; while similar rock from the north end of the lake or from Abram's lake, still further north, gave nothing. The highest of our assays from this region gave only $2 per ton however. A similar deposit is found at the Quartzite mine near Finmark, where a fine grained gneiss or hälleflinta containing pyrites shows traces of gold in every assay.

The hills of quartz porphyry, generally much sheared and metamorphosed, on the northwest shore of Round lake, also contain iron and copper pyrites, and in every case yield a small quantity of gold when assayed.

If these practically limitless bodies of rock should be proved to contain on the average even $3 or $4 per ton of gold they will turn out to be very valuable properties; but our assays, from samples taken it is true as specimens of rock and not picked as being most likely to be auriferous, have not yielded more than $2 per ton.

If veins exist in these hills of slightly auriferous rock, one would expect to find the gold concentrated in them as the silver ores of Norway are in veins passing through similar fahlbands.

The encouraging aspects of the region.

Looking at the region as a whole one may note two encouraging features: first, the area in which gold is known to occur is steadily increasing as prospectors go farther afield in our Huronian tracts; and secondly, a few of our mines are now under the control of skilful and practical owners and managers who intend to work them so as to make a profit from the gold produced, and not simply to sell them as prospects to some capitalist who knows nothing of the conditions of the region. A few successful business ventures will prove the turning point in the long history of failure in our gold mining; and will give an impetus to the development of our mineral resources that has long been looked for, but looked for in vain.

GLACIAL AND POST GLACIAL DEPOSITS.

Evidences of glacial action in the region.

The whole region shows in a marked degree the effects of glacial action in polished and striated surfaces of rock, in boulder clay and morainic deposits, and in the rock-rimmed or drift-dammed character of most of the innumerable lakes scattered over the country. Beside the effects of ice action, there are many examples of stratified sand and clay deposited in the great lakes which followed up the retreat of the ice front at the close of glacial times.

It is intended to put on record here the results of our observations, and to give a general idea of the accepted theory of the origin of the superficial deposits, which in some places have great importance as affording the only wide stretches of cultivable land in the region.

Directions of glacial striæ.

Observations on the direction of glacial striæ were made especially at points not reported on by Dr. G. M. Dawson and Dr. A. C. Lawson, who have noted them from many points on the Lake of the Woods and Rainy lake[24]. The bearings given are reduced to the astronomical north, the variation of the compass for the different portions of the region having been supplied by Mr. Stupart, Director of the Meteorological Service of the Dominion.

LIST OF GLACIAL STRIÆ.

	degrees.
Shoal lake, west of Lake of the Woods	46
Frenchman's head, south of Lonely lake	44
Pelican lake	29
Between Minnietakie and Abram's lakes	34
Minnietakie rapids	49
North shore of Minnietakie lake	39
South shore of Minnietakie lake	44
Southwest shore of Minnietakie	64
A little west of last point	59
Still further west	59
Long southwestern bay of Minnietakie lake	39
Shoal lake, Seine river	54

[24] A. C. Lawson in Geol. Sur. Can., An. Rep. 1885, p. 132, CC. etc. and 1887 p. 164 F, etc. Also Warren Upham in Geol. and Nat. Hist. Sur. Minnesota, 1893, p. 35, etc.; and G. M. Dawson, Geol. and Resources of the 49th Parallel. pp. 205 206.

	degrees.		
Fifth portage up Seine river	48		
Seine river above Calm lake	18		
Seine river east of Calm lake	8		
Island quarter of a mile east of last	3		
Deep bay farther east on Seine river	28	(earlier.)	8 (later.)
Large island in archipelago	8		
Another island	8		
North bay of lake expansion	8		
Small island a little east of last	43	(earlier.)	(18 later.)
Mouth of Eye river	8		
Steep Rock lake, west side of third reach	43		
Steep Rock lake, lower end	48	(earlier.)	(8 later.)
Atik-okan river	43		
Islet north of Sand Point, Lac des Mille Lacs	37		
Mouth of Savanne river	42		
South end of Lac des Mille Lacs	27		
Hight of land south of Lac des Mille Lacs	37		
Lake Shebandowan	47		
Mattawin river	27		
Gold creek near Mattawin river	7		
Gold creek at another point	0		
Finmark	42		
Jackfish Bay, lake Superior	22 to 27		

General tendency of the striations.

The directions given in the previous table are expressed in degrees east of north. It will be observed that there is a general tendency of the striations in two prevalent directions, northeast and southwest, and nearly north and south, the latter trend occurring along the Seine river between Calm lake and Steep Rock lake and also on the Mattawin river and its tributary, Gold creek. More than two-thirds of the readings range in the neighborhood of northeast and southwest, the extremes being 22°—64° east of north and west of south, and the mean almost exactly 45°. In three instances intersecting striations were found, in each case the later of the striations running more nearly north and south than the earlier ones. In several examples along Seine river it is possible that earlier, northeast and southwest, striations have been wiped out by later glaciation from a more northerly direction. The infrequency of the later striations having a north and south direction suggests that they were not produced by a second, widely extended ice sheet, but perhaps by lobes of ice advancing locally during the general retreat of the glacial mass. The lobe which produced the later striæ between Calm lake and Steep Rock lake must have had a width of at least twenty-two miles. There is no observable reason in the configuration of the hills and valleys of this special region to account for so marked a change of direction in the readvance of the ice, and it is worthy of note that Lawson found only the older set of striations (approximately northeast and southwest) in the Rainy lake region, just to the west[25], though four or five instances of the nearly north to south direction are mentioned in his account of the Lake of the Woods region, still farther to the west[26].

It is held by Mr. Warren Upham that toward the close of the Ice Age there was a deflection of the glacial current, bringing limestones from the

[25] Geol. Sur. Can. 1887, p. 164 F, etc. [26] Ibid. 1885, p. 132 cc, etc.

Winnipeg region southeast to the Lake of the Woods and Rainy river[27], and that this change of direction of the flow of ice is still more marked in Minnesota and as far east as the Wisconsin boundary.

It may be that the centre of glaciation proved by Tyrrell to have existed just west of Hudson bay may have been active somewhat later than the one east of Hudson bay, and its ice sheet may have covered the region of northerly striations after the eastern ice sheet had retreated.

Two centers of glaciation.

In general we may divide the area covered by a great glacial sheet into two parts, a more or less broad peripheral one where ground moraine, or boulder clay, has been left in thick beds, with here and there a loop of terminal moraine rising ridgelike upon its surface; and a wide central area which has been scoured more or less bare, the loose materials resulting from ages of weathering having been swept away and the solid rock beneath having been carved into the rounded form known as *roches moutonnées*. The central portions, where the pressure of ice was greatest, have been areas of erosion, and the edges where the ice was thinned and rendered stagnant have been areas of deposit. The northern and western portions of Ontario, the "rocky lake country," illustrate the erosive power of an ice mass; while southern Ontario and the States to the south give an example of an area of deposit.

Areas of erosion and areas of deposit.

On this account the region now under discussion, lying somewhat within the area of erosion, has commonly been swept very bare, its rounded hills and valleys showing boulder clay as a rule only in the lee of projecting hills. Boulder clay or till of the kind usual in southern Ontario seems not very common, though good examples of stony blue clay were observed on Lake Minnietakie. More commonly one finds irregular fragments of rock, often quite angular, pushed into the lee of some knob or ridge of rock, little or no clay filling the interstices.

Terminal moraines and

Terminal moraines are not often a noticeable feature, though stony ridges, probably of that nature, are found on the nine-mile portage north of Wabigoon Tank on the Canadian Pacific Railway.

Huge perched blocks are found in a few places, south of Elbow lake for instance, stranded indiscriminately on the summit of rocky hills or in the valleys. Very often such blocks, and also the smaller masses found in the lee of hills, are found to have been transported only a short distance, having no rounding of edges or corners and being of the same lithological character as the neighboring hills.

stranded boulders.

LACUSTRINE DEPOSITS.

Postglacial deposits.

Postglacial deposits of stratified gravel, sand and clay have been formed at a number of points in the region, and represent the work of lakes and rivers during or since the departure of the ice. The best example of these deposits is to be found along Rainy river, where stratified calcareous clays provide several townships of excellent soil, the farms along the Ontario side of the river giving the traveller who has just come by steamer from the rocky hills of Rat Portage and the Lake of the Woods a very pleasant surprise.

[27] Nat. Hist. Sur. Min. 22nd An. Rep., p. 42.

Lacustrine beds of

These lacustrine beds have roused the interest of every geologist who has visited the region, and accounts of them may be found in various reports, the matter being well discussed by Lawson in his report on the Rainy lake region.[28]

the Rainy river region, and the probable source of their material.

A little below the falls at Fort Frances the escarpment cut by the turbulent current rises about twenty-seven feet, the lower half consisting of a bed of grayish clay with small striated boulders, probably a somewhat re-arranged boulder clay, and the upper half of stratified clay and coarse sand containing many small shells (sphaerium) and a few large unios. The most interesting feature of the boulder clay is the number of yellowish-white limestone pebbles and boulders, very like certain limestones near Winnipeg, both in general appearance and the species of fossils which they contain. These boulders, which have been burnt for lime along Rainy river, form a startling contrast to the granites, gneisses and green schists found elsewhere in the region ; and various suppositions have been made to account for their occurence so far from home, glacial ice or icebergs being generally held to have transported them. Dr. Dawson suggests that they may have been derived from a floor of limestone in the southern part of the Lake of the Woods, but Mr. Upham considers that they have been transported by glacial action from the paleozoic region west of the Lake of the Woods and lake Winnipeg. The fact that, though now found in stratified beds, the limestone pebbles are often polished and striated, favors the theory of glacial transport.

Such pebbles and boulders have not been found east or north of the Rainy river and Lake of the Woods region, and it is held by Upham and Lawson that this represents the eastern boundary of glacial lake Agassiz The western and southern shores of this great extinct lake have been traced in Manitoba by Mr. Upham and Mr. Tyrrell very completely by means of beaches distinctly cut at different levels, but such beaches have not been found to the north and east. Mr. Upham estimates that lake Agassiz covered no less than 110,000 square miles, much exceeding the combined areas of the five great lakes of the present day, which amount to only 94,650 square miles ; and holds that the northern and eastern shores of this vast body of water were formed by the ice of the retreating glacier. Mr. Tyrrell thinks however that lake Agassiz never covered the whole of this area at once, but formed a belt of water lying along the edge of the glacier and following it up in its retreat.[30] Lakes Winnipeg, Manitoba and the Lake of the Woods may be looked on as remnants of this great body of water left behind when the Ice Age ended and the present drainage system came into operation. The richest land of Manitoba is formed of the silts of lake Agassiz, and the farm land of Rainy river has been deposited in one of its southeastern bays, where the calcareous till has been worked over into stratified clay.

Lake Agassiz.

Other areas of lacustrine deposits, on Seine and Turtle rivers, Wabigoon lake, and

While the Rainy river area of good soil is much the largest of the lacustrine deposits in western Ontario, it is by no means the only one. Smaller, but still important areas occur on Seine river, Turtle river and particularly

[28] Geo. Sur. Can., 1887, p. 169F, etc. [29] Geol. Sur. Can., 1888-9, Report E.
[30] Am. Geol., July, 1891, p. 26.

in the neighborhood of Wabigoon lake. In each of these localities one finds widespread stratified clay forming good soil, but, so far as observed, free from the yellow limestone boulders. Lawson mentions the deposits just referred to ; but thinks that the one near lake Wabigoon was formed at a later stage in the recession of the ice barrier, after the waters of lake Agassiz had shrunken beyond the height of land and formed a relatively small body of water between the height of land and the ice to the north.[31] Still other areas of stratified clay and sand exist to the north and east, and one of them, at the Hudson Bay post on Lonely lake, is of considerable interest.[32] During our visit to Lonely lake last summer this deposit was somewhat carefully examined, and was found to present some peculiar features. A little west of the post, which stands on a strip of sand and gravel rising only a few feet above the lake, but backed by hills of sand, there is an escarpment thirty-five or forty feet high, though the lower part of the section is hidden by a talus. About half way up one finds stratified sand, then what appears to be sandy till containing a few large boulders and some small polished stones, and above all a few feet of stratified clay, the different beds varying greatly in thickness. Stratified clay is found near the lake level, where the bank is low, a few rods to the east of the highest cliff, perhaps part of a lower bed of stratified clay.

Lonely lake.

Features of the Lonely lake deposit.

As the materials from the escarpment are worked up by the waves, the sands are drifted along shore and partly added to the sand beach on which the store and other buildings of the post stand. The gravel is shifted a shorter distance in the same direction, and the large stones form a sort of rough breakwater just below the cliff. Most of the larger stones are Laurentian gneisses, but some Huronian stones occur also. The pebbles are chiefly of the same nature, but include some flat concretions from the sandy cliff, a few exemples of chert and jasper, and a few yellow limestones very like those of Winnipeg. Many of the fragments of jasper are small, sub-angular and have the oolitic look so common in the red jasper associated with the Minnesota iron ores, and found also in the Nipigon region by Dr. Bell. Thin sections of some of these jaspers examined under the microscope show exactly the structure figured and described by Mr. J. E. Spurr from the Mesabi range, Minnesota, and supposed to represent altered glauconitic material.[33] Many of the cherty fragments, which are generally weathered to a creamy or reddish color, are fossiliferous, containing especially portions of corals, such as favosites of Niagara type. Mr. B. E. Walker, to whom the fossils were submitted for determination, names one very perfectly preserved pygidium of a trilobite *Encrinurus nereus* (Hall), and states that the type specimen is from the Niagara at Racine, Wisconsin. The yellow limestone fragments, which sometimes contain cherty parts like those found separate, are also fossiliferous, crinoid stems, fragments of brachiopods and of cyathophylloid corals being found in them. Looked at as a whole, Mr. Walker thinks the fossils are probably of Niagara age, but possibly Lower Devonian.

[31] Geol. Sur. Can., 1887, p. 176F.

[32] Summary Rep. Geol. Sur. Can., 1893, pp. 17-19, Mr. Dowling.

[33] Bul. X, Minn. Geol. Sur., 1894, p. 230, etc.

Just north of the Hudson Bay post there are sandy ridges and several small lakes, one a steeply walled kettle some sixty feet deep, the region as a whole being probably morainic, though our observations were not extensive enough to settle its character more particularly.

There are stratified sands to the south of Lonely lake and on lake Minnietakie, where a sand cliff rises fifteen or twenty feet above the water on the southern shore. Lonely lake is not far below the water shed, but it is unlikely that the hills north of it rise high enough to receive any of the beaches of lake Agassiz; and it is probable that the deposits just described were formed at the edge of the ice at the time of Upham's West Superior lake,[34] the eastern successor of lake Agassiz, perhaps on an outlet toward the north past a lobe of ice. In that case the jaspers and fossiliferous cherts and limestones may have been transported from the south and west by floating ice. Possible origin of the Lonely lake beaches.

On the other hand, both jaspers and fossiliferous paleozoic pebbles and boulders may have had their origin far to the northeast, on the shores of Hudson bay, and may have been transported glacially to the Lonely lake region, the waters of lake Agassiz or its immediate successor having merely rearranged the materials already on hand. Dr. Bell has described red jasper with "floating particles," like that of the Nipigon series near Thunder bay, lake Superior, from Long island on the east shore of Hudson bay, nearly seven hundred miles northeast of Lonely lake;[35] and has found yellowish limestone, probably of Niagara age, on Albany river near the southwest side of James bay,[36] and at other points near Hudson bay. Mr. A. P. Low finds similar rocks on Severn and Fawn rivers near the west shore of Hudson bay.[37]

Whatever the source of the materials deposited, there seems good evidence in the Lonely lake escarpment of the action of a large lake having its surface at least thirty-five or forty feet above the present water level, and apparently bounded toward the north by a great glacier.

It is entirely probable that other areas of silty lake deposits will be found here and there overlying the Laurentian and Huronian rocks, and furnishing sections of good soil.

Further northeast, down the slope of the drainage toward Hudson bay, Dr. Bell has shown the existence of deposits containing marine shells, proving that the basin of Hudson bay at the close of the glacial period stood about four hundred and fifty feet lower than now;[38] but it is unlikely that this depression was ever great enough to make lake Agassiz or the West Superior lake an arm of the sea. Depression of the Hudson bay basin at the close of the glacial period.

[34] Upham, Geol. and Nat. Hist. Sur., Minn., 1894, p. 157, etc.
[35] Geol. Sur. Can., 1877-78, p. 23C.
[36] Ibid., 1871-2, p. 111.
[37] Ibid., 1886, p. 18F.
[38] Geol. Sur. Can., 1872, p. 112; 1875-76, p. 340.

STRATIGRAPHICAL AND PETROGRAPHICAL NOTES.

Distinctions and relationships of Laurentian and Huronian rocks.

During the summer a wide range of the so-called Laurentian and Huronian rocks of Ontario west of lake Superior have been visited, and the impressions of the previous year confirmed. Following Lawson's excellent work on the Lake of the Woods and Rainy lake,[39] the distinction between these two formations has been made a purely petrographical one, the underlying gneisses and associated granites and syenites being called Laurentian, notwithstanding the fact that at many points they display a well marked eruptive contact with the overlying rocks; and hence must have consolidated at a later time than the Huronian. In the region visited there are a few rocks of gneissoid character which show a markedly banded structure, suggesting that they may have been sediments older than Lawson's Keewatin and Couchiching, but the great majority of the gneisses penetrate the overlying schists and contain fragments of them, angular or more or less blending into the surrounding gneiss.

It would no doubt be more logical to confine the name Laurentian to the oldest complex of thoroughly crystalline rocks, serving as a foundation for all succeeding rocks, and to describe the clearly eruptive rocks which penetrate and more or less modify the overlying schists as eruptives of later date than at least the earlier members of the Huronian. If this were done, very little of the territory under consideration could be classed as Laurentian, perhaps none of it with certainty. Until much more minute and careful work has been done in western Ontario, it will be impossible in practice to separate the gneisses, granites, etc., of the two ages with any certainty; and for practical purposes the petrographical distinctions are sufficient. On this account no attempt has been made to make the present work accord with the conclusions so patiently and exhaustively worked out by Van Hise in his correlation paper on the Archaean and Algonkian.

Nor does it seem advisable to change the well known Canadian name of Huronian, although some of the rocks overlying the so-called Laurentian are perhaps older than the typical Huronian, e.g., the Couchiching mica schists and gneisses of Lawson.

In the region referred to in this report, besides the almost certainly sedimentary Couchiching rocks at the base, we find the very complex series of eruptives, pyroclastics and, less commonly, waterworn clastics of Lawson's Keewatin, to be of widespread occurrence and great importance as containing the gold-bearing veins of the district. Lawson distinguishes a lower, generally basic, series of Keewatin rocks, largely green in color; and a higher, more acid series, quartz porphyries, felsites, schists, etc. The green Keewatin rocks and the eruptives which burst through them are more commonly auriferous than the more acid upper series.

[39] Geol. Sur. Can., 1885, Part CC, and 1887, Part F.

MINNIETAKIE AND SHEBANDOWAN REGIONS.

In last year's report instances were given where quartz porphyry cutting the green schists as a dyke had been rendered schistose, the strike of the schist in the dyke being the same as that on each side,[40] showing that in at least some cases the schistose structure is no indication of the original bedding of the rock; and similar proofs were found this summer on the shores of lake Minnietakie, felsitic-looking schists crossing the strike of green schists. Examples of peculiar structure.

The relationships of the so-called Laurentian and Huronian have been very fully discussed by Lawson in his two reports on the Lake of the Woods and Rainy lake; but it may be mentioned that similar relations have been observed north of lake Minnietakie and near lake Shebandowan.

In the former portion of the region on the shore of Canoe lake, on the way south from Lonely lake, one finds gneiss typically Laurentian in look, having flesh-colored layers from a half-inch to three inches in thickness, separated by gray layers of similar thickness. This banded gneiss includes large and small fragments of a dark schistose rock, sometimes angular, sometimes tailed out. This gneiss has not at all the look of the granitoid gneisses of Rainy lake, and the breccia-like appearance may have resulted from the unequal plasticity of the two rocks when acted on by shearing forces at a temperature below that of fusion.

Not far from the previous example a glaciated surface on the shore of Canoe lake displays a most complicated structure. A gray, medium grained gneiss and a darker schistose rock have been crushed into fragments, large and small, slightly disarranged, and then cemented with a small quantity of granitic paste. The large fragments have sometimes been again broken and slightly faulted. The darker, dioritic portions have sharper edges than the gneiss when faulted in this way. Through the whole pass thin dykes of pegmatite of a different character from the cementing granite. May not this gneiss and diorite schist be original Laurentian rock not greatly softened by heat?

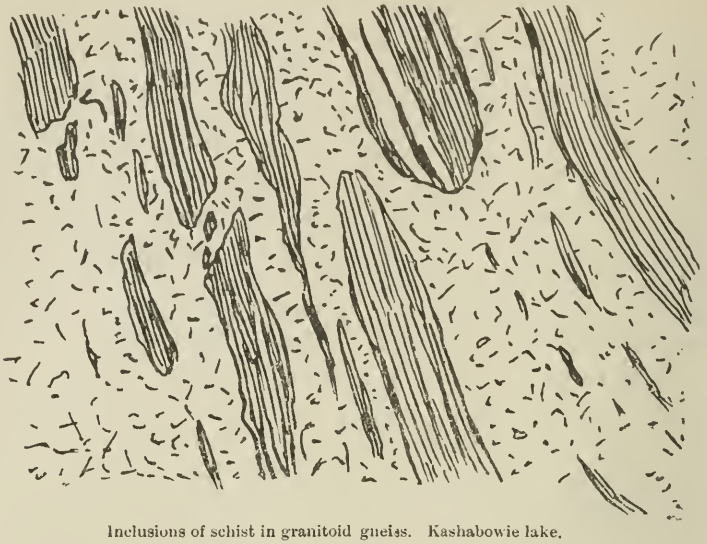
Half a mile below Pelican rapids a large mass of dark mica schist, looking something like a Couchiching rock and filled with garnets, is seen imbedded in fine grained gray gneiss; a little above this rapid darker and paler gneisses are found interbedded with one another, and on Pelican lake the gneiss and green hornblende schist alternate at one or two points before one comes upon the Huronian area proper.

At the southern end of Kashabowie lake, between Lac des Mille Lacs and lake Shebandowan, a contact of coarse grained gray or red porphyritic granitoid gneiss with Huronian schist was observed by Mr. E. Burwash last summer. The granitoid gneiss at some points might be described as forming a gigantic breccia with the pale gray schist, large bands and fragments being slightly separated by the gneissic paste. This example is not unlike some of the contacts seen on Rainy lake and well described by Lawson.

Admitting that, so far as studied, practically all of the so-called Laurentian of this region underlies the lowest Huronian rocks with an eruptive Character of the real Laurentian.

[40] Fourth Rep. Bureau of Mines, 1894, p. 87.

unconformity, it becomes a question of great interest to settle the character of the real Laurentian, which must have formed the solid basis on which the



Inclusions of schist in granitoid gneiss. Kashabowie lake.

Huronian rocks were deposited. Dr. Lawson has discussed this problem in the light of the pebbles and boulders contained in the Keewatin schist conglomerates [41] He describes pebbles of quartz, granite and felsite or quartz porphyry. Some attention was paid to this problem by us last summer, and the results may be given here.

A schist conglomerate a little below Abram's lake, some miles south of the contact of Laurentian and Huronian, contains many well rounded boulders, some a foot in diameter. Thin sections of three of them prove that they are granites, consisting of quartz, more or less crushed or with undulatory extinction, orthoclase containing many flakes of secondary muscovite, an unusual amount of plagioclase and a small quantity of some dark silicate completely changed to chlorite and calcite. These rocks are not greatly different from eruptive granites found piercing the Huronian schist a few miles to the south.

Eruptives and Conglomerates of Shoal Lake Region.

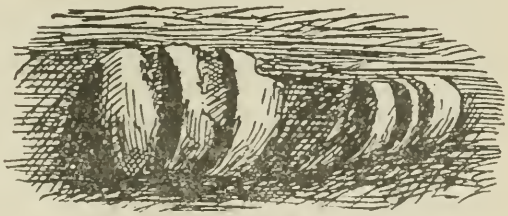
Granite and schist conglomerates of the Shoal and Bad Vermilion Lakes region.

On account of the important gold bearing veins found in the area of eruptive granite between Shoal lake on Seine river and Bad Vermilion lake, some time was devoted to the study of that region and a somewhat careful collection was made of the materials occurring in the schist conglomerate adjoining the granite boss, one of the conglomerates examined by Lawson.[42] As he states, the pebbles, which vary in size, and are usually only a few inches in diameter, are distinctly water-worn, rounded or oval in contour, and are enveloped in a green chloritic schist. The schistose structure of the

[41] Geol. Sur. Can., 1887, 82 F, etc

matrix probably results from pressure and shearing. Occasionally a pebble shows the effect of shearing action, being broken and the parts somewhat faulted.

Beside the pebbles of felsite and quartz porphyry mentioned by Lawson, a number of other species of rocks are found, such as a white, fine-grained, pulverulent sandstone almost free from cement; a few pebbles of medium to coarse-grained gneiss and granite; dark green graywacke and chloritic and sericitic schists of exactly the same character as the adjoining Keewatin rocks. At Wiegand's point on Shoal lake the conglomerate consists of large stones, occasionally two feet in greatest diameter. Some of the softer schistose boulders have yielded to shearing. H. V. Winchell and U. S. Grant find, among pebbles like those referred to, also black and red jasper.[42]



Broken pebble, schist conglomerate. Shoal lake.

Thin sections of nine of these boulders or pebbles have been examined microscopically. Among them are only two which may be metamorphosed sediments; two are granites, green gray and containing a considerable amount of plagioclase; and the rest quartz porphyries, one of them sheared into a sericitic schist. One of the porphyries has a poicilitic groundmass, and another is of special interest since it displays a very perfect spherulitic structure, the spherulites ranging in size from a diameter of a quarter of a millimeter to two millimeters. They are pale gray and are imbedded in a darker gray groundmass, the latter making up less than half the rock

Constituents of pebbles of the conglomerate.

The groundmass is microgranitic, and consists, apparently, of minute individuals of felspar, quartz and chlorite. The porphyritic minerals are quartz, often dihexahedral, orthoclase and plagioclase. The quartz crystals, which are somewhat rounded and embayed, form the commonest nuclei for the spherules, but occasionally a felspar served as starting point. In several cases long slender strips polarizing uniformly with the nuclear quartz extend into the feathery intergrowth of quartz and felspar forming the spherule, but more commonly no connection of the sort can be seen. The radiating feathery intergrowths often show curved, plumlike forms, which generally have not quite parallel extinction.

None of the other sections made from these pebbles require special mention.

Near the corner post of AL112-114-115 at the highest point in the region, a short distance northeast of the granite area, one finds a conglomerate or breccia of a different character in some respects. The sub-angular pebbles, one of which measured six inches by four, consist of quartz porphyry, felsite and some other compact greenish rock and quartz. The cement is not

[42]Geol. Sur. Can., 1887, p. 82 F. [43]Geol. Nat. His. Sur., Minn., 1894, p. 66.

schistose or markedly chloritic, but has the appearance of a graywacke containing many angular quartz fragments. While the pebbles are of much the same character as those of the schist conglomerates on Shoal lake, the rock has evidently suffered much less from shearing and other metamorphic influences.

Source of the pebbles of conglomerate.

Looking at the conglomerates as a whole, two or three interesting inferences may be drawn from the rocks which they contain. First, several of them, such as the pulverulent white sandstone and the spherulitic quartz porphyry, appear to have no analogues in the region; secondly, that few or none of the pebbles, so far as my observations go, can be looked on as probably derived from the underlying Couchiching rocks, though Lawson looks on the rocks under discussion as a basal conglomerate of the Keewatin, separating it from the Couchiching;[44] lastly, that the rocks represented in these boulders and pebbles, with the exception of the sandstone and one or two of the porphyries, can be quite closely paralleled in the schistose and eruptive rocks of the surrounding Keewatin, and the later eruptives which burst through them. As Lawson has shown, these schist conglomerates appear to lie near the base of the Keewatin, which makes the origin of their Keewatin-like materials all the more puzzling.

The source of these remnants of a portion of the earth's crust once solid and worn by the action of the sea, but now vanished, is certainly mysterious. Perhap's Lawson's suggestion that they are parts of the floor on which the Keewatin rocks were deposited, since fused to form the "foliated granite known as the Laurentian gneiss,"[45] is the correct one; but it seems singular that the original material of these boulders, which in the main resemble the present Keewatin, should have been fused to form granite, while the Keewatin immediately overlying was not at all fused, but only rendered somewhat more crystalline.

The breccia-like conglomerate found at the highest point in the region, while containing much the same materials, has been much less metamorphosed, and may be of later age. Winchell and Grant state that the conglomerate seems to rest unconformably on the granite just northwest of Shoal lake.[46]

Granite and anorthosite eruptions of the region.

The eruptive masses rising through the Keewatin between Shoal and Bad Vermilion lakes consist chiefly of granite and anorthosite. They have been described by Lawson[47] and by Winchell and Grant, and were briefly taken up in the previous year's report of the Bureau of Mines.[49] During the last summer's visit the contacts of these two eruptions with one another and the surrounding schists were examined at numerous points, and a number of specimens secured, illustrating different phases of these rocks and their relationships.

The largest area of anorthosite encloses the southern arms of Bad Vermilion lake, and is broken by at least three masses of eruptive granite. Two or three miles to the west, on Seine bay, a series of points and islands of the same rock extends, with some interruptions, westwards along the southern

[44] Geol. Sur. Can., 1887, p. 84F.
[45] Geol, Sur. Can., 1887, p. 85F.
[46] Geol. and Nat. Hist. Minn., 1894, p. 66.
[47] Geol. Sur. Can. 1887, p. 99 F and 146 F.
[48] Geol. and Nat. Hist. Sur. Minn., p. 58.
[49] Bur. of Mines, 1894, p. 92.

shore of the bay for about ten miles. The rock is generally white, almost like crystalline limestone, with only a very small proportion of darker minerals occupying spaces between more or less perfect phenocrysts of plagioclase, ranging in size from a quarter inch to a foot in longest diameter. Towards the western end of Bad Vermillion there are points where the green constituent becomes more important, and the rock may be called a porphyritic gabbro.

Frequently portions of chloritic or sericitic schist have been enclosed by the anorthosite, showing its post-Keewatin age; and occasionally a green massive rock, apparently weathered diabase, is seen, perhaps representing dykes which have cut the anorthosite, but more probably fragments of Keewatin massive rocks swept off by the molten anorthosite.

Points of difference from typical anorthosites of eastern Canada.

While the rock is clearly an anorthosite, as was recognized by Lawson,[50] it presents some points of difference from the typical rocks of the name, as described so well by Dr. Adams,[51] the felspars being always white, never purplish in color, and comparatively rarely showing the sheared and granulated character so often found in eastern Canada. While more or less distinct cleavages may be seen in most examples of the Seine bay and Bad Vermillion anorthosite, the rock is generally badly weathered and comparatively few thin sections are fresh enough to show the twin striations well. The freshest example was obtained from a hill at the mouth of Seine river.

A study of numerous thin sections shows that the bulk of the rock, generally more than nine-tenths, consists of a very basic plagioclase, usually sprinkled with zoisite particles or completely changed into a saussuritic mass. The darker portions consist mainly of a fibrous or scaly mineral with parallel extinction, or nearly so, and low double refraction, probably serpentine, but perhaps a member of the chlorite group. Augite was found as a remnant only once, and then was not of the diallage type. The only other minerals observed are results of weathering, a little epidote along with the zoisite, probably also a little albite, and very small quantities of calcite.

The felspars, where fresh enough to enable one to study them, are found to range in angle of extinction of twins according to the albite law from seventeen to thirty-seven degrees; the average of a dozen measurements in thin sections from Bad Vermilion being about twenty-four degrees, and from the mouth of the Seine about thirty-two degrees. It appears then that the former felspar is bytownite and the latter anorthite, indicating a more basic felspar than that of the typical anorthosite, which Dr. Adams finds to be labradorite.[52]

The freshest section studied (783, mouth of Seine river), shows the felspar as large interlocking crystals, sometimes having intersecting sets of twin striations. The felspar individuals often show a thin band of fresh, clear felspar, where one joins the other; and when examined with a high power this clear felspar strip proves to be continuous with the individual to

[50] Geol. Nat. Hist. Sur. Minn., Bull. No. 8, 1893, Second Part, p. 7.

[51] Ueber das Norian, etc., Stuttgart, 1893; and Can. Rec. Science, vol. VI, No. 4, etc.

[52] Ueber das Norian, Separat Abdruch, Neues Jahrbuch für Min., etc., Bielageband VIII; and Can. Rec. Science, vol. VI, No. 4, p. 190.

which it is joined, but more acid in character, having extinction angles ranging from eight to fourteen degrees, corresponding to labradorite. In one case a bytownite crystal has been broken, the parts slightly shifted, and then cemented with labradorite, most of the twin lamellæ running across the clear strip of the latter felspar.

Analysis of the anorthosite.

As the freshest example of the anorthosite of the region, it seemed worth while to have an analysis made, the result being as follows in No. I. :

	I.	II.
SiO_2	46.24	54.45
Al_2O_3	29.85	28.05
Fe_2O_3	1.30	0.45
FeO	2.12	.....
MnO	trace	.....
CaO	16.24	9.68
MgO	2.41	.....
Na_2O	1.98	6.25
K_2O	0.18	1.06
CO_2	1.03	(H_2O) 0.55
	101.35	100.49
Spec Grav	2.85	2.69

For the sake of comparison an analysis of anorthosite from Rawdon, Que., is given in column No. II.[53] The low percentage of silica and of soda, and the high percentage of lime as compared with the anorthosite from Quebec will be noticed, the chief differences no doubt resulting from the fact that the Seine river anorthosite consists chiefly of anorthite, the Rawdon one of labradorite.

Analysis No. I was made by Mr. William Lawson, fellow in chemistry in the laboratory of the School of Practical Science, Toronto.

The specific gravity (2.85) is very high, perhaps because of the presence of considerable zoisite. The specific gravity of a specimen from Bad Vermilion lake was determined to be 2.76, corresponding to its slightly more acid character, consisting as it does of bytownite.

The most basic of the massive rocks.

The results of the analysis show that the anorthosite from the mouth of the Seine is one of the most basic of the massive rocks; and it is possible that its low silica contents and the fact that it consists essentially of anorthite instead of labradorite would justify a separation under a distinctive name; but there seems little doubt that numerous intermediate rocks, such at that from Bad Vermilion, link it to the typical anorthosite of the Province of Quebec. On the whole it will be wiser not to add another name to the rapidly growing burden of the lithologist; for it is clear that these rocks are not definite species, but shade into each other just as the plagioclase felspars do. Possibly a binomial nomenclature like that tacitly admitted in the classification of other rocks, such as the granites, might be adopted, the typical anorthosite being called labradorite anorthosite; that from Bad Vermilion lake, bytownite anorthosite; and the rock from the mouth of the Seine, anorthite anorthosite. The last term has however a very tautological sound. It is possible that more acid anorthosites corresponding to andesine, oligoclase or even albite may yet be found.

[53] Sterry Hunt as quoted by Adams, Neues Jahrbuch, Bielageband VIII, p. 491. Various other analyses are given on the same page.

Character of granite holding gold-bearing fissure veins.

The eruptive granites associated with anorthosite have been described by Lawson,[54] and Winchell and Grant,[55] and were referred to in the previous report of the Bureau of Mines,[56] and therefore do not require a minute description here. The most easterly of the granite outcrops was not observed by Lawson, but is the most interesting of the three or more granite exposures, since it contains numerous gold-bearing fissure veins of great promise. The Bad Vermilion lake granites vary in grain from coarse to fine and are usually greenish, but sometimes flesh-colored. Under the microscope they are found to contain much quartz, generally broken or having undulatory extinction, a large amount of plagioclase associated with the orthoclase, and a little biotite or hornblende. Frequently the plagioclase is present in such large quantities as to make it doubtful if the rock should not be called quartz diorite. In many examples the dark minerals are weathered to greenish substances and the rock becomes protogine granite, all transitions being observed between quite fresh and greatly weathered portions. In the neighborhood of quartz veins the rock undergoes very marked changes, and at the edge of the vein becomes decidedly schistose. Examined with the microscope, felspar is seen to be largely or completely turned to decomposition minerals, especially sericite. All transitions between the unchanged granite and a quartz sericite schist may be observed; and one may conclude that there was great shearing and crushing action when the fissures were opened, the changes of mineral composition resulting probably partly from this and partly from the circulation of heated water.

Analyses of the granite.

In spite of the extensive metamorphism of the schistose selvages of the veins, the chemical composition of the rock has not been greatly modified, as will be seen from the accompanying analyses, No. I of the freshest granite observed, and No. II of a schistose example.

Specimen No. I (thin section 794) is flesh-colored and occurs on the road leading from Shoal lake to Island bay not far from the latter point. No. II (thin section 800) is greenish and sericitic and is the country rock of one of the quartz veins on AL75.

	I.	II.
SiO_2	76.20	72.23
Al_2O_3	14.41	16.43
Fe_2O_3	0.00	1.17
FeO	1.49	0.93
CaO	2.19	1 49
MgO	0.65	0.78
K_2O	2.44	5.13
Na_2O	3.32	0.54
	100.70	99.15
Spec. Grav	2.65	2.78

The analyses were made by Mr. William Lawson in the chemical laboratory of the School of Practical Science, Toronto.

The first specimen may be looked on as typical of the less weathered granites of this eruptive center. The high percentage of silica and the fact that soda is present in larger quantities than potash are the most prominent

[54] Geol. Sur. Can., 1887, p. 56F and 146F.
[55] Geol. and Nat. Hist. Sur., Minn., 1994, p. 58, etc. [56] Bureau of Mines, 1884, p. 89, etc.

points in its chemical composition. The second specimen is not quite characteristic of the selvage rock of the quartz veins, other examples showing more quartz. Its composition is that of a typical granite, in spite of the fact that the quartz is seen under the microscope to be crushed into fragments and the felspar completely changed to sericite. It is rather surprising to find so little soda in proportion to the potash. In that respect the crushed rock differs greatly from the fresh one, and is probably not characteristic. The sum of the alkalies is almost exactly equal to that of the fresh granite, suggesting that little or no alkali has been removed in solution.

Relationship of granite and anorthosite.

At several points, e.g., near the foot of Island bay, these granites contain angular fragments of green schistose-looking rock, very like some of the Keewatin rocks, but I observed no inclusions of the schist conglomerate. It looks at one or two places where granite and anorthosite come in contact as though the granite pushed apophyses into the anorthosite, and near the southeast shore of Island bay a portion of the latter rock appears to be included in the granite; but this relationship, on which Lawson and Winchell and Grant differ, I am not able to settle with certainty. At two places where granite and anorthosite come together a few feet or inches of dark green horneblende rock intervene.

A few dikes of felsite or microgranite cut the schistose and granitic rocks of the region, but none were observed in the anorthosite. Under the microscope none of these rocks prove to be true felsites, all being distinctly granular.

In addition to the massive rocks so far mentioned, some badly weathered diabases occur along side of the anorthosite, perhaps representing a third facies of magma belonging to this old eruptive center; but no point of special interest was observed in thin sections made from them.

Probable origin of the anorthosite and granite bosses, and its bearing on the persistency of s.

Lawson looks on the anorthosite and granite areas as representing the base of a truncated boss which protruded through the lower part of the Keewatin, and suggests that they may represent the vent through which first basic and afterwards acid volcanic materials were poured forth, forming parts of the upper Keewatin.[56] If they are plutonic bosses, and not laccolitic as Lawson assumes in the case of the Malignites intrusive on Poohbah lake not far distant, there is every reason to believe that the gold-bearing veins cutting the granite may continue to great depths. The development work thus far done in the region shows no sign of their running out at a depth of two hundred feet.

Other Granite Bosses.

During the summer a similar association of fissure veins containing promising amounts of free gold with granite bosses pushing through Huronian (or Keewatin) schist was observed in various parts of the great archæan area of western Ontario; but anorthosite was found only at Bad Vermilion. On account of the economic importance of the gold-bearing fissure veins occurring in these granitic rocks, specimens from most of these outcrops have been studied and the more important instances will be referred to here.

[56] Geol. Sur. Can., p. 56 and 57 F.

At about the most westerly point in the Province, on Bag bay, an arm of a second Shoal lake near the border of Manitoba, very rich gold quartz occurs in what seems to be a wide and continuous vein in granite. Two specimens of the country rock prove to differ considerably. One consists of rather shattered quartz, little orthoclase and much plagioclase, often idiomorphic and having a zonal structure, with a considerable amount of brown biotite. Except for the color of the mica, this rock is very like many examples from the Bad Vermilion boss. The other specimen is red in color, and of a very different structure as seen under the microscope. The felspar is mainly orthoclase or microperthite and is greatly intergrown with quartz as micropegmatite, and the small amount of mica present is colorless. This is perhaps a dyke rock penetrating the other granite. Granite of the Bag bay.

The next examples to be described were sent from the Regina mine on Whitefish bay, Lake of the Woods, a mine which is now a steady producer of gold. Of the three specimens sent, one is pale greenish in color and under the microscope is found to consist of much quartz, some weathered orthoclase and a large amount of somewhat idiomorphic plagioclase with a little muscovite. Though the rock looks quite unlike most of the Bad Vermilion granites, its general structure and mineralogical composition are closely like them. Another example is flesh-colored and schistose, and consists of crushed quartz and felspar largely changed to sericite. The third rock is quite unlike the others, and affords a fine example of micropegmatite with scarcely any mica. It is probably a dyke rock. I must thank Mr. Motley, who was in charge of the mine, for the specimens examined. The Regina mine,

To the east of Bad Vermilion lake, at the Harold lake mine near the Seine river, we find gold-bearing fissure veins in a pale green granite or protogine, greatly weathered but still showing idiomorphic plagioclase with crushed quartz and sericite. The Sawbill lake quartz veins, which are of a promising character and will be worked next summer, also occur in a plagioclase granite of a very similar kind, sometimes sheared into a quartz sericite schist. The specimens examined were kindly furnished by Mr. Chewett, of Toronto. the Harold lake mine and Sawbill lake regions.

It will be seen then that eruptive granites, unusually siliceous and rich in plagioclase, pushing through green Keewatin schists, contain auriferous fissure veins at a number of points in the west of the Province; and it is evident that such granite bosses deserve careful examination by explorers. Eruptive granites deserve the attention of explorers.

Whether the granite itself is the bearer of the gold, which may then be looked on as laterally secreted in the veins; or the green schists supply the metal and the veins in the granite simply furnish a place of deposit from circulating waters, has not yet been determined.

Lake Superior Region.

It is altogether probable that in many localities beside the ones hitherto referred to, granite bosses will be found associated with gold-bearing veins. The only other instance studied by us is that of Jackfish bay, about a hundred and thirty miles east of the Sawbill lake instance. Here a large mass of granite and syenite interrupts the Huronian schists, and contains a small Granite and syenite masses at Jackfish bay, north shore of lake Superior.

vein carrying free gold just where the railway bends westward from the shore of the bay. This was developed slightly some years ago by the Messrs. McKellar, but proved too small and pockety to be of value. The immense vein of gold-bearing quartz called the Empress mine lies in the schists a half mile north of this boss, and may have been influenced by its presence.

ROCKS OF JACKFISH BAY.

At the Jackfish bay station red syenite shows itself, the Huronian rocks being found a short distance to the northeast. It is a hornblende syenite containing much microcline and a little quartz, and is quite unlike any of the western granites so far described.

Near the Empress mine, three or four miles north of the station, and also on the west side of the bay, the rock is gray or faintly flesh-colored, and distinctly a granite. A microscopic examination proves that it resembles those previously described. Both sections examined contain much quartz and plagioclase, the latter often idiomorphic. Orthoclase is present in smaller amounts. The specimen from the railway cutting on the shore of the bay contains, as the dark constituents, much hornblende and a little biotite; the specimen from near the mine, only biotite. Titanite occurs as large brown crystals in each.

Dikes cutting the granite.

Some dikes that cut the granite near a tunnel on the west side of Jackfish bay were studied. They run about east and west and are well displayed as dark bands in the granite cliff. The widest is twenty-two paces across, medium grained and gray in color in the middle, compact and black at the edge. A thin section shows that the rock from the middle of this dike is quartz diabase, consisting of quartz, chiefly inter-grown with felspar as micropegmatite, plagioclase, common augite and biotite, the latter having a curious dichroism, red-brown and green with nearly equal absorption. Magnetite and slender needles of apatite occur as accessory minerals. The dark rock from the edge of the dike is very strikingly porphyritic in thin sections, slender laths or wider crystals of plagioclase and augite crystals or polysomatic masses lying in a very fine-grained groundmass consisting chiefly of augite, magnetite and minute plagioclase strips. Both augite and plagioclase exist then in two generations. The rock from the edge of the dike seems more basic than that from the middle, but no analysis was made to settle the matter quantitively. This dike has many points in common with some dikes in the Rainy lake region as described by Lawson.[57] A second dike is twenty-four feet wide, and consists of diabase of the ordinary type, free from quartz. The third dike is much narrower, being only three feet wide, and presents one peculiar feature, since it cleaves into thin plates parallel to the walls in which it is enclosed. Under the microscope it proves to be of the ordinary type, differing from the last only in containing some roundish masses of serpentine that may represent olivine.

SILVER ISLET ROCKS.

The Silver Islet dike.

Specimens were taken from the Silver Islet dike, which apparently was the silver bearer of that famous mine, since the vein was rich only in or near this dike. The rock is green gray, coarse-grained and somewhat variable in

[57] Geol. Sur. Can., 1887, p. 158 F, etc.

character. One specimen contains slender prisms of a mineral that at first glance suggests hornblende. Under the microscope one finds that the rock is a badly weathered quartz diabase. The hornblende-like mineral consists of serpentine, most of the fibers parallel to the longest axis, giving parallel or nearly parallel extinction. In places however the fibers are confused. No augite of any kind remains, serpentine and a little brown biotite replacing it. The felspar also is greatly decayed, though the edges are commonly somewhat fresh. The quartz sometimes occurs as quite large masses filling interstices, but is generally intergrown with felspar as micropegmatite. The quartz seems undoubtedly primary, showing no mosaic structure and containing the usual inclusions, apatite needles and cavities containing a fluid and bubbles.

A finer grained diabase, apparently part of a sheet, not a dike, was obtained at the village on the mainland opposite Silver islet. It is much fresher and of a quite different habit. The augite is purplish gray and not greatly weathered; the plagioclase too is well preserved. Very little quartz occurs in this rock, and what there is shows hardly a trace of the micropegmatite structure.

The associated rock is a dark gray Animikie slate or shale, having no points of special interest.

Interesting Minerals.

In addition to the minerals mentioned in last year's report, two interesting specimens of minerals from the Lake of the Woods region have been given me by Mr. J. S. Whiting of Rat Portage. Native copper

One specimen consists of tiny but wonderfully perfect crystals of native copper from Andrew bay, Lake of the Woods. These crystals are all twinned octahedra or groups of such twins, the twinning being after the spinel law. Few of the crystals are more than an eighth of an inch long. They were picked out of a weathered schist, and are certainly the cleanest cut copper crystals I have ever seen.

The other specimen, which comes from Gold creek, Pine Portage bay, contains the rare silver telluride, Hessite, hitherto unknown in Ontario. The mineral occurs as lead gray plate-like masses with quartz and a very little pyrite and chalco-pyrite. An almost pure bit weighing .075 grams was analysed by Mr. Lawson with the following results: and Hessite.

Tellurium	35.40
Silver	61.01
Total	96.41
Specific gravity	7.968

No gold was found after precipitating the silver; and the loss of 3.59 per cent. probably represents a little iron or copper pyrites. The small amount available for analysis prevented the determination of any other constituents. If we estimate the tellurium and silver found as representing the pure mineral, we get the percentage 36.67 Te, to 63.20 Ag, which comes very close to the theoretical composition of Hessite, Ag_2Te.

This is the third telluride thus far found in Ontario, sylvanite having

been reported from several points in the gold region west of lake Superior, and a telluride containing lead, probably nagyagite, having been obtained at the Huronian mine, as reported by Dr. Ellis of the School of Science, Toronto.

Since the account of the Ontario occurrence has been written, Hessite has been found in the Kootenay region in British Columbia, making a second locality in the Dominion for this rare mineral.

SECTION III.

A TOUR OF INSPECTION IN NORTHWESTERN ONTARIO.

Windsor to Fort William.

The route of all steamers of the Canadian Pacific Railway Co's lake line was until last year across Georgian bay, lake Huron and lake Superior, from Owen Sound to Fort William; but for part of the season last year one of the boats was put upon a new route, from Windsor to Fort William. As part of a larger scheme of exploiting some of the newer mineral districts in the northwestern regions of the Province, I had arranged with the Inspector of Mines to undertake a share of his duties by visiting mines and mining works on the Seine river and Lake of the Woods; and leaving Toronto by the Credit Valley division of the Canadian Pacific I got on board the Alberta (Captain McAllister) at Windsor, on Saturday, 10th August, having as companions Mr. John Cameron, of the London Advertiser, and my son. The day was intensely warm, and the run up by rail was more unpleasant than it might have been by reason of the clouds of dust which came pouring in at every open window. They will manage these things better in Bellamy's time; but they might be better managed in ours, as to dust at any rate, if not as to heat. Even on the steamers it is not always possible to escape the heat, for out in the midst of lake Huron next day men were uncomfortably warm in the lightest of summer clothes.

Windsor to Fort William.

It was 3 o'clock in the afternoon when the Alberta left her dock, and the sun was beating down with a force which kept the mercury up in the nineties. "Bide a bit for lake Huron," the Scotch captain said; but the first breath of "caller air" was caught on lake Superior. There was no rush to get up the lakes however, for the berths of the Alberta were not more than half taken. Perhaps this was not so much because men and women did not desire a more congenial climate, as that they did not have the means to get away. It was a general complaint at the summer resorts of the upper lakes, I found, that tourists were much fewer than usual last year.

On the Alberta.

The sail out of the Detroit river, across lake St. Clair and up the St. Clair river, is very pleasant, although the scenery is quiet. Many boats are coming and going, singly and in long tows—passenger boats, sailing vessels, whalebacks and steam barges, many of great size, besides tugs, yachts and launches large and small and suited to every need and taste.

Detroit's island park, which we passed to the left, has been very much improved during recent years, with walks, driveways, waterways, bridges, playgrounds, plantations of trees and gardens of flowers, and thousands of citizens flock to it for recreation in the warm summer days.

Detroit's island park.

The canal at the mouth of St. Clair river, which I saw in course of construction thirty years ago, affords safe and easy passage for the largest boats on the lakes; yet it is none too deep for the present low level of the water.

The canal in St. Clair river.

The work was undertaken by the government of the United States, although it now appears that it is in part if not wholly on the Canadian side of the international line.[1] Along the upper end rows of handsome cottages, with here and there club houses of imposing size, have been built on piles over the water, giving one an idea of Venice who never saw the city of the Doges. The mosaics and colors of the Venetian architecture are conspicuous enough in shingle and stain, and the long rows of columns and the loggia are not wanting; but the longer one looks at these houses on piles, the more they suggest an idea of the lake-dwelling age.

Sarnia's island park.

Stag island (Isle aux Cerfs) in the river St. Clair is Sarnia's park, and it is a very pretty resort. The lower two-thirds of it is wooded, and the upper end looks like a well kept lawn. A number of cottages occupy the east side close to the river; while on the Canadian bank were seen many camping parties in tents and cabins, and on island and mainland troops of children welcomed our boat with joyous shouts.

The Alberta called at Sarnia and tied up for an hour, taking on a few passengers and a large quantity of freight. The palace steamer Northwestern came in a few minutes later and crossed over to Port Huron, having left Detroit at 4 o'clock. She is a boat of graceful lines, and one of the swiftest on the lakes, yet it is doubtful if she is earning a dividend.

It was dark when the Alberta left Sarnia, and timid passengers were expecting a blow on lake Huron; but Sunday morning broke clear and warm, without a ripple on the water. A dim haze gave a weird effect to the many sailing vessels and steamers to be seen on every side of us, plowing their ways northward and southward and leaving no trace of a furrow behind.

On lake Huron.

Mackinac island.

Early in the afternoon we began to sight the Michigan shore, and at 4.30 we reached Mackinac island and learned that the Northwestern had come in at 9 in the morning. She had a start of half an hour at Port Huron: yet the run was made in seven hours' less time than the Alberta's, which two or three years ago was one of the fastest boats on the great lakes. The instance illustrates another revolution in rapid transit.

Mackinac has points of resemblance to Quebec. The town is on the lower ground, a few feet above the lake level. The fort crowns a high escarpment behind, its white walls, the officers' quarters, barracks and blockhouses presenting a very picturesque view. There are beautiful drives over the island, much of which is thickly clothed with cedar. Among the points of interest one should not fail to take in are the Natural Arch on a cliff through which

[1] The boundary between Canada and the United States from the foot of lake St. Clair to the foot of lake Huron, according to the declaration and decision of the Commissioners of Great Britain and the United States under the sixth article of the Treaty of Ghent, 1814, respecting boundaries, and signed at Utica, 18th June, 1822, is described as follows:

"... To the northwest of, and near, the island called Isle à la Pêche, to lake St. Clair; thence, through the middle of said lake, in a direction to enter that mouth or channel of the river St. Clair, which is usually denominated the Old Ship Channel; thence, along the middle of said channel, between Squirrel island on the southeast, and Herson's island on the northwest, to the upper end of last mentioned island, which is nearly opposite Point au Chênes, on the American shore; thence, along the middle of the river St. Clair, keeping to the west of, and near, the islands called Belle Rivière Isle, and Isle aux Cerfs, to lake Huron."—Hertslet's Treaties, vol. IV, p. 497.

one sees a patch of blue water, and Sugar Loaf, which stands like a monument on the denuded plain of Upper Helderberg; old Fort Holmes on the tableland behind the highest escarpment, 300 feet above the lake, which the British and Canadians built and occupied in the War of 1812-15, and the battle-ground behind it where the Americans were put to rout; Lover's Leap and Pontiac's Lookout, on the cliff upon the south side of the island, and the elegant cottages and grand hotel along the drive down the slope to the village again. The island has had many ups and downs since the first Jesuit mission was planted there 225 years ago, but these are as nothing to the far more real ups and downs in its geologic history, so clearly revealed by the rock formations and the bold outlines of the wave-cut terraces. Mackinac to Sault Ste. Marie.

The Majestic, of Collingwood, a new and fine steamer built for the north shore traffic, was at Mackinac before us, and we left together at midnight for Sault Ste. Marie. It was said that the two boats had raced over the same course on the previous trip and another trial of speed was expected this time, but if it took place the fact was hidden from the passengers. The Alberta took the new channel cut through on the American side behind Sugar island, which, besides affording deeper water than St. George's lake, shortens the distance several miles. She reached her dock at Sault Ste. Marie at 9.30 Monday morning.

The Canadian canal was not completed at that time, although the last touches were being put upon it; and so the Alberta had to await her turn to enter the canal on the American side. Owing to the enormous increase in the lake traffic, tedious delays have occurred at the Sault during recent years. Occasionally vessels have been detained ten or twelve hours, following a storm or fog, but the boat was fortunate which under the most favoring circumstances got through without a loss of four or five hours. It looked from the number of vessels waiting above and below as though we might not get away before three or four o'clock in the afternoon, and passengers betook themselves to see the sights of the place. The Sault and the canals.

Several parties enjoyed the sensation of shooting the rapids in Indian canoes, if there be joy in getting within arm's reach of death of one's free will. Thirty years ago I one day took a stroll through the old cemetery of the Michigan town and came across the graves of a party of six men and women, lying side by side, and the record of the headstones told how they had perished together in an attempt to shoot the waters of the relentless Sault. That has been lesson enough for me; I get out of the wild river all the enjoyment I want from some safe point on terra firma.

The captain had warned us against going too far away, and on no account to think of doing the Canadian canal, as he would enter the lock at the first chance and wait not a minute for any man. A few of us therefore spent most of the time looking over the works of the new lock of the American canal, a gigantic enterprise now nearing completion. The walls of cut masonry are 45 feet high from the floor and 400 feet long, with a width of 80 feet, and the workmanship and the equipments are of the best which the wit of engineers can devise. This is no doubt the largest lock in America,

and perhaps in the world, but it yet remains to be shown that a larger number of vessels can be passed through it in the course of twenty-four hours than through the longer but narrower lock on the Canadian side of the river. This will be seen next year when the big lock is finished for traffic.

Out of the canal and up Whitefish bay.

At two o'clock in the afternoon, to the surprise of many, the Alberta got the call to enter, and soon she steamed out of the canal and on through the upper reach of the river into the wider waters of Whitefish bay. One whaleback with its nose deep in the water was met as we entered the bay, and another upward bound was passed. Barges with red iron stains on their sides were no doubt freighted with ore from the mines of Michigan, Wisconsin and Minnesota, bound for Cleveland and other ports on lake Erie. A large white steamer which had a mile the start of us out of the canal was overhauled and passed off Gros Cap, and the ease with which boats of every class were left behind proved how stanch and swift the Alberta is, compared with any on the lakes excepting the most modern.

A beaver farm on Isle Parisienne.

Isle Parisienne, a low-lying and densely wooded island in the bay to our right, is interesting as the seat of an experimental beaver farm. A colony of beavers was planted there in 1893 by Mr. Thomas Kirkwood, owner of the fine natural park on Point of Pines. In the spring of the following year none of the industrious animals were to be seen, and it was supposed that they had escaped to the mainland, the nearest point of which is about eight miles distant; but later in the year they were discovered with quarters established upon a little stream in the interior of the island. The result of this experiment will be awaited with interest, for if successful it may lead to the establishing of many beaver farms elsewhere under like conditions, and no other plan seems so feasible to save the beaver race from extermination. Isle Parisienne has an area of about 3,000 acres.

Caribou island.

Another interesting island lying near the route of steamers to Fort William, but out in the open lake, is known as Caribou island. It lies a little within the Canadian boundary as laid down by the Commissioners under the Treaty of Ghent; but being low it is not often noticed. This island was visited by Alexander Henry in 1771, and a very entertaining account of it is given in his book. It had been described to Mr. Henry by his Indians two years before while stationed on Michipicoten island (Isle de Maurepas) as covered by a yellow sand, which he was credulous enough to fancy must be gold. All that the Indians knew of it however was from the report of some of their ancestors, concerning whom a tradition had come down to them that, being blown upon the island by a storm, they had escaped with difficulty from the enormous snakes by which it was inhabited, and which were the guardians of the yellow sand. Mr. Henry was eager to visit so remarkable a spot, but was unable to do so until some time afterwards. He had discovered copper on the Ontonagan river in Michigan, and along the shore north of Point Mamainse on the Canadian side, and had made arrangements for the organizing of a company of adventurers to work the properties; but of course the island of Yellow Sands was the first in Mr. Henry's mind. The rest of the account is best given in his own words:

The interesting story of it told in Alexander Henry's Travels.

"In 1770 Mr. Baxter, who had sailed for England, returned, bringing with him papers by which, with Mr. Bostwick and himself, I was constituted a joint agent and partner in and for a company of adventurers for working the mines of lake Superior. We passed the winter together at the Sault de Saint Marie, and built a barge fit for the navigation of the lake; at the same time laying the keel of a sloop of forty tons. Early in May, 1771, the lake becoming navigable, we departed from Point aux Pins, our shipyard, at which there is a safe harbour, and of which the distance from the Sault is three leagues. We sailed for the Island of Yellow Sands, promising ourselves to make our fortunes, in defiance of its serpents.

A shipyard at Point aux Pins.

"After a search of two days, we discovered the island with our glass; and on the third morning, the weather being fair, steered for it at an early hour. At two o'clock in the afternoon, we disembarked upon the beach.

"I was the first to land, carrying with me my loaded gun, and resolved to meet with courage the guardians of the gold. But, as we had not happened to run our barge upon the yellow sands in the first instance, so no immediate attack was to be feared. A wood was before us at some little distance from the water's edge; and I presently discovered the tracks of cariboux.

"Soon after I entered the woods, three of these animals discovered themselves, and turning round, gazed at me with much apparent surprise. I fired at one of them and killed it; and at a mile further I killed a second. Their size was equal to that of a three-year old heifer. The day following I killed three.

"The island is much smaller than I had been led to suppose it; its circumference not exceeding twelve miles. It is very low, and contains many small lakes. These latter I conjecture to have been produced by the damming up of the streams by beaver, though those animals must have left the island, or perished, after destroying the wood. The only high land is toward the east.

"A stay of three days did not enable us to find gold, nor even the yellow sands. At the same time, no serpents appeared, to terrify us; not even the smallest and most harmless snake. But, to support the romance, it might be inferred that the same agency which hid the one had changed the other; and why should not the magic of the place display itself in a thousand varied exhibitions? Why should not the serpents have been transformed into hawks? And why should not the demons delight in belying every succeeding visitor, by never showing the same objects twice? Sure I am, that the hawks abounded when we were there. They hovered round us and appeared even angry at our intrusion, pecking at us, and keeping us in continual alarm for our faces. One of them actually took my cap from off my head.

Exploding the romance

"On one of the lakes we saw geese; and there were a few pigeons. The only four-footed animal was the caribou, and this, it is probable, was first conveyed to the island on some mass of drifting ice. It was however no new inhabitant, for, in numerous instances, I found the bones of cariboux, apparently in entire skeletons, with only the tops of their horns projecting from the surface, while moss or vegetable earth concealed the rest. Skeletons were so frequent as to suggest a belief that want of food in this confined situation

Graves of the caribou.

had been the destruction of many; nor is anything more probable; and yet the absence of beasts of prey might be the real cause. In forests more ordinarily circumstanced, the graminivorous animals most usually fall a prey to the carnivorous, long before the arrival of old age; but, in an asylum such as this, they may await the decay of nature.

"The alarm of these animals, during our stay, was manifested in the strongest manner. At our first arrival, they discovered mere surprise, running off to a distance, and then returning, as if out of curiosity to examine the strangers. Soon, however, they discovered us to be dangerous visitors, and then took to running from one place to another, in confusion. In the three days of our stay, we killed thirteen.

"The island is distant sixty miles from the north shore of lake Superior. There is no land visible to the south of it, except a small island, on which we landed."

From the situation of the island as described by Henry, as well as from the fact that numerous caribou were found upon it, there can be no doubt that it is the one now known as Caribou island.

Alone on lake Superior.

It was five o'clock when we passed between Whitefish and Mamanise points into the wide waters of lake Superior, and soon the Alberta steered a course to the north-westward, away from the track of the fleet employed in the trade of the numerous ports on the American shore of the lake. There was not a craft to be seen when darkness closed around us; yet if the promenade of the hurricane deck was all but deserted, it was not so much that we had lost sight of sail and land as that only the more robust of the passengers could stand the change of temperature in the open air, as indicated by a fall of more than 30° in the thermometer since Sunday noon on lake Huron.

We were told on leaving the Sault canal that we might not reach Fort William until two p.m. Tuesday, but the boat made such good headway during the night that the point of Thunder cape was passed at seven in the morning, and after making a call at Port Arthur she tied up at her dock in the Kammistiquia river at 9.30, half an hour ahead of the schedule time, having made the run from the Sault canal in 19½ hours.

An Excursion south of Savanne.

Reports of recent gold discoveries east and west of Fort William.

At Fort William I met Peter and John McKellar, who informed me of a recent discovery of gold near Jackfish bay on the north shore of lake Superior, which they had prospected and had found the vein to be twenty feet wide

[2] Travels and Adventures in Canada, by Alexander Henry, pp. 226-230. Mr. Henry was familiar with Captain Jonathan Carver's Travels, who he says learned something of the fables of the yellow sand, though he places the treasure upon the Isle de Maurepas (Michipicoten). "One of the Chipeways told me," Carver wrote, "that some of their people were once driven on the Island de Maurepas, which lies to the northeast part of the lake, and found on it large quantities of heavy, shining, yellow sand, that from their description must have been gold-dust. Being struck with the beautiful appearance of it, in the morning, when they re-entered their canoe, they attempted to bring some away; but, a spirit of amazing size, according to their account, sixty feet in height, strode into the water after them, and commanded them to deliver back what they had taken away. Terrified at his gigantic stature, and seeing that he had nearly overtaken them, they were glad to restore their shining treasure; on which they were suffered to depart without further molestation. Since this incident, no Indian that has ever heard of it, will venture near the same haunted coast."

and a mile in length, yielding gold in paying quantities clean across. They had procured a survey of three locations and hoped to more thoroughly explore them during the fall with a view to organize a working company. They also suggested that I should visit the Quartzite mine near the Mattawin river, which was reported to be an extensive ore body of country rock assaying $6 to $8 per ton. I went over to Port Arthur by the tramroad and saw Crown Timber agent Munroe, with whom I arranged to visit Silver Islet and the Black Bay region upon my return from the west.

Dr. Coleman's party at Savanne.

A telegram and letter received from Dr. Coleman at Savanne informed me that he was in camp there, having just arrived from Rainy lake, and was ready to start on a projected week's exploration of the lake Shebandowan country, which we had previously planned to make together. A quantity of supplies was purchased for this tour, as suggested by Dr. C., and everything was made ready to take the first train for the west.

The railway time goes back an hour at Fort William, where the Canadian Pacific enters upon the 24-hour system, and the hours from noon to midnight are counted as from 12 to 24 o'clock. Our train was an hour late, and did not leave until 23 o'clock. Savanne was reached at 1.45 Wednesday morning, and there being no hotel accommodation in the place the station master kindly provided beds.

I rose at 5.30 and walked down to the Savanne river, a quarter of a mile south of the station, where Dr. Coleman and his party had pitched their tents. The forenoon was occupied in completing the outfit for our excursion to lake Shebandowan. A shower of rain fell in the morning and the wind rose, which made the start uncertain, but at 12.30 p.m. we broke camp and left at a venture, with four canoes and a party of eight, including two guides and a cook.

ON LAC DES MILLE LACS.

Savanne river to Sand point.

The Savanne river is sluggish, with reedy banks all the way to its mouth, a distance of two miles from the station. The bay into which it empties—one of the innumerable arms of Lac des Mille Lacs—is about a mile wide, and on the north side of it is the new saw mill and buildings in course of erection by the Savanne Lumber Company. On the south side is a low rocky point covered with small birch. The lumpy reddish-brown waters of the bay gave a hint of what might be looked for in the open lake, which we entered around the point with a head sea on. We made west for Birch island, where there was an Indian encampment, and having bought some whitefish we took thence a course south towards Sand point, keeping for safety as well as we could in the shelter of the islands. It was four o'clock when we reached the point, although the distance from Savanne was not more than ten miles by the course we took, but as the wind was rising and the waves were breaking violently over the spit which here extends nearly across the lake, it was not deemed safe to venture into the wider reach of waters beyond.

There was another reason, too. Bread was required for next day's rations, and no place is so favorable for the successful baking of it as a

An out-of-doors culinary outfit.

good sand beach. A tin oven (the Connecticut baker of our boyhood days) is good enough for a small loaf or a pan of cakes or buns, and we had one of them; but to bake a fifteen or twenty-pound loaf for a camping party there is nothing so suitable as the old-fashioned round and flat-bottomed cast-iron pot with a cast-iron lid, such as our mothers used in the wide old-fashioned fireplace of the log cabin, before the days of the cooking stove. Well, our Indian cook having first built a hot fire on the sand, and having got through with the preliminaries of mixing, setting and kneading, draws the fire at one end, scoops a hole into the now thoroughly heated bed for the pot, which is deposited with its charge of light and spongy dough and carefully covered with the lid, piles the hot sand all around and over the pot, and sits down like a Stoic until the big brown loaf is done and well done. Perhaps it was the strong baker's of the Manitoba No. 1 hard, or the cooking in the old-fashioned pot, or maybe the appetite which comes to one who lives and works and sleeps in the bracing air of our northern woods; but surely no more toothsome bread has ever been baked than that which our Indian cook supplied from his improvised oven in the hot sands.

An Indian garden.

A portion of Sand point was occupied last summer as a garden by one of the Indians of the Poplar Point reserve, which village may be seen about a mile and a half beyond, towards the south. It had a promiscuous crop of potatoes, cabbage, beets, peas and beans, and although the soil was not rich all were growing thriftily.

Aboriginal remains unearthed.

A path leading from the garden towards the village was followed about a hundred yards south, to a spot where Dr. Coleman had discovered a skeleton four days before, on his way up the lake. It was exposed in the face of the bank, which is gradually being cut down by the action of the water, and the doctor had carried away with him the skull, leaving the rest of the skeleton intact. The skull was large and round, with an oblong hole on the right side above the ear, the result very probably of a blow from a tomahawk or other lethal weapon. The front teeth were worn down, but were otherwise sound and well preserved. The body had been buried in a sitting posture, facing the south, in a bed of gravel about three feet below the surface and fifteen feet above the lake. Below it to the water's edge was a bedded deposit of fine sand. We removed the remaining bones with the help of a pick, and from the measurement of the thigh and shin bones it is estimated that the man when living stood not less than six feet in height and possibly six feet three inches. The vertebræ were disjoined, and the pelvis bones were decayed. Fragments of pottery were found with the body, the rim with markings on the outer side; the inner surface was of a bright red color and the vessel had apparently held small pieces of red pigment.

The Indian reserve at Poplar point.

Our camp was astir Thursday morning at six, we breakfasted at seven, and although the headwind was still fresh our flotilla of four canoes set out across the bar, taking a southwesterly course down the lake. We called at Poplar point to pay the owner of the garden for a supply of potatoes and other vegetables taken at Sand point. There are about one hundred Indians at this reserve, and twice as many dogs, and the whole village gathered around

us for a pow-wow. Among the rest was Chief Peter, who walked over from his teepee with the looks and air of a patriarch. He has long white beard and moustaches and shaven cheeks, and although his figure is slightly bent he is strong and vigorous. Peter told us that he is a hundred years old, but he does not appear to be more than seventy-five. He has great-grand-children twelve years old, and children younger than they, for he has been three times married, and has two wives living with him now, one of whom was an adopted daughter. Chief Peter does not know when his people came to live at Poplar point; his father had been born there, and his grandfather; his people had always been there. They are pagans on this reserve, and do not want to be anything else. Chief Peter had noticed that Christian Indians would not work, "too much soul," and (a good St. Paul rule of which this Peter had likely never heard) if one did not work he should not eat, and "Injun bakadé (hungry) all the time." The Roman Catholics had desired to establish a mission and a school on the reserve; but while the Indians were willing enough to have a school they objected very decidedly to a mission, saying that it would bring about divisions among their people, and they wished to be all as one. A number of years ago the Minister of Indian Affairs made an attempt to teach them agriculture, to which end he made the band a present of a bull, a cow and an ox, and sent a halfbreed to instruct the Indians how to plough the land. The three animals were hitched together to the plough, but when the day's work was done and they were loosed, the bull swam out into the lake and was drowned. Such is the story as told by one of our guides, but possibly with humorous exaggeration. It is certain however that these Indians do not take kindly to the ways of civilized men, for the bark-covered teepees are preferred to the log houses which have been built for their greater comfort.

Chief Peter.

Our course from Poplar point was westward about two miles over lumpy water and then southward three miles to the southeast bay of Lac des Mille Lacs. To the right are seen the remains of a dock, and one who did not know anything of the history of the country might wonder what had led to the building of a dock in such an out-of-the-way corner of our country.

A relic of modern history.

The route of trappers, hunters and factors in the palmy days of the Hudson's Bay and Northwest Companies was from the Savanne river across Lac des Mille Lacs and the Baril portage, and thence by many lakes and stretches of river into the southeast arm of Rainy lake. The southeast arm of Lac des Mille Lacs leads into this route, but it formed no part of it; and indeed the fur-traders needed no substantial dock-works for their fleets of canoes. We have only to go back a quarter of a century to learn the story hinted at by the broken down dock. It is told in the annual reports of the Department of Public Works at Ottawa, under the title of the once familiar Dawson Road route, which for seven or eight years, beginning with 1870, was the great highway from eastern to northwestern Canada. There was a well-graded road from Port Arthur (or Prince Arthur's Landing as it was then called) to the foot of lake Shebandowan, a distance of 45 miles. Then there were small steamers or tug-boats and barges on the lakes, with well-equipped portages where these were required, which conveyed passenger and freight

Old route of the fur-traders,

and the Dawson Road route.

traffic with expedition from east to west and west to east. On Lac des Mille Lacs the Dawson route joined the old route of the fur-traders towards the west, and besides providing a highway for settlers going from the older Provinces into Manitoba and the Northwest Territories, it gave comparatively easy access to sections of the Canadian Pacific Railway, then under construction, at Savanne and Rat Portage. As evidence of the traffic on this line it may be stated that from 1st July, 1875, to 30th June, 1876, there were carried over it 2,172 passengers and 1,107 tons of freight. The total length from Prince Arthur's Landing (Port Arthur) to Fort Garry (Winnipeg) was 452 miles, including from the foot of lake Shebandowan to the Northwest Angle of Lake of the Woods 303¾ miles of navigable waters, and eleven portages with an aggregate length of 8⅓ miles. The dock we had just passed was at the end of the second of those portages, numbered from the east.

BACK INTO THE ST. LAWRENCE BASIN.

Across a portage into St. Lawrence waters.

We paddled up into a grassy stream, at the foot of a rounded hill of Huronian slates into which were cut the initials and names of scores of people, most of whom had doubtless been passengers bound for the Northwest, as the dates were in the early seventies; but there were also the names and initials of some well known explorers. Here we had dinner, and then packed across the portage to Kashabowie lake. This portage is a mile long, and it crosses the height of land separating the St. Lawrence and the Nelson river basins; yet there is little difference in the levels of the two lakes, and the land does not rise above them anywhere more than fifteen or twenty feet. The road had been well built, but it is now grown up with bushes, and only a footpath remains. At the Kashabowie end is a small clearing partly covered with scrubby trees, for the poor sandy soil does not favor a thrifty vegetation. It had probably been occupied by the dwellings and stables of the men who attended the portage, but no signs of a building are visible; or it is better to say that I saw none. The dock is fallen to pieces, and the charred ribs of a boat are standing out of the sand. We had an overpowering stench of skunk here, and walking along the sand beach some fifty yards I discovered the fragment of a skunk's skin which the waves had washed up, and which no doubt was the source of all the odor that filled and fouled the air. A rose bush in full bloom would not be detected by its odor at one-half the distance.

Kashabowie lake.

The water of Kashabowie lake is as clear blue as that of lake Superior itself, and is in this respect a very agreeable contrast to the water of Lac des Mille Lacs. It is a very irregular lake, contracting into river-like channels and expanding into wide stretches, with long arms extending in several directions. There are a number of islands, some of which are beautifully clothed with spruce and birch and a carpet of deep green moss. The water-lines on the rocky shore show at least two permanent levels of water, one three feet and the other six feet above the present level. The lower of these is probably the mark of high water in spring and early summer, and the higher one the mark of water during the maintenance of the Dawson route, when the outlet was raised several feet by a dam.

Portage to Shebandowan lake.

The length of Kashabowie lake, on the authority of Dawson's report, is nine miles, but nearly twelve according to Proudfoot's measurement, and the length of the portage to Shebandowan lake is three-quarters of a mile. This portage is graded up like a railway track, and is yet in excellent condition. Kashabowie river leaves the lake by two channels on the east side of the portage road, which soon unite. Its stream is a succession of rapids and falls, and at Shebandowan lake is a fall of seven or eight feet which has cut back a gorge perhaps seventy-five yards from the lake shore line.[3]

Camp on lake Shebandowan

At the foot of Kashabowie portage, which is the first on the Dawson route, is a clearing of about an acre in extent, and here we encamped on Thursday night. The once substantial buildings of squared timber are now thrown down to the foundations. The site they occupied is very charming, and would be an ideal spot for summer cottages, with a rising background of green timber, the noisy river flanking it upon the left and the beautiful lake Shebandowan[4] studded with islets in front.

Arranging to visit Moss township and Mattawin river.

We met a party with Mr. James Hammond, of Fort William, and Mr. Russell, L. S., of Port Arthur, just returned from surveying eight mining locations, after having been out three weeks. They too were pitching their tents on the bank of the lake for the night, and after talking over our plans Mr. Hammond agreed to go back with us next morning to the Huronian mine, near to which his own work of exploration had been carried on since early spring. He had discovered gold in quartz veins and gold also, he believed, in quartzite or country rock at several places east and southwest of Moss township, and was elated with the promise of the district as a prospecting field for minerals. It was also arranged that upon returning from the Huronian mine Mr. Hammond should accompany us to visit a number of iron locations on the Mattawin range, and gold locations on Gold creek, southeast of lake Shebandowan.

A CANOE TRIP TO ROUND LAKE.

Lake Shebandowan to Round lake.

Friday morning, August 16, a party of eight left camp at seven o'clock with three canoes and paddled to the extreme west end of lake Shebandowan, a distance of about eight miles. There are numerous islands in this part of the lake, most of them covered with timber. Along the north shore the trees are mostly spruce and birch, growing close down to the water's edge, but in places the fire has made ugly gaps. At the west the lake is narrow and

[3] The distances as laid down on Hume Proudfoot's MS. map in the Crown Lands Department (1892) from the railway crossing of the Savanne river to lake Shebandowan (measured on the ice) are as follows:

	Chains.
On Savanne river to its mouth	189.00
On Lac des Mille Lacs to Sand point	383.41
" " portage	405.86
On portage to Kashabowie lake	76.56
On Kashabowie lake	933.36
On portage to lake Shebandowan	60.00
Total	2,048.19

The whole distance from Savanne to lake Shebandowan by this route is therefore about 25½ miles.

[4] The Indians pronounce it Sheb-an-do-wan', with the accent on the last syllable.

shallow, and saving the winding channel of a creek which enters at the extreme end it is covered over with coarse grass and lily-pads. Up this creek through a slush of water and peat the canoes were poled to the shore. Then followed a portage of over a half-mile to Mink lake, where had once been a road, but now there is nothing but a poorly beaten path winding in and out through a thicket of bushes.

Experience on a portage.

Imagine yourself fresh out of an office, carrying one end of a heavy canoe, the sharp edge of the keel resting on your shoulder, and a well-hardened man at the other end making the pace for you at three miles an hour or better: then you can appreciate the innocent idea of a nice summer outing for a civil service man bent on seeing our mining regions. The man who will carry a pack of 75 to 150 pounds or the end of a built canoe across a trail half a mile or a mile long, clambering up and down high ridges of rock, picking his way through bog or muskeg, striding over fallen timber, and getting wet to the skin should he strike a portage after a shower of rain, does not find any recreation in the business. It is downright hard work, and until the sinews are hardened and the appetite sharpens to a diet of bacon and beans he will vote it a distressing effort every time.

Mink, Silver, Duck and Round lakes.

We made the portage to Mink lake in fifteen minutes, and crossed that pretty little lake just in time to get under the canoes for shelter from a dash of rain. A short portage brought us to a long narrow body of water known as Silver lake, on the shores of which there were signs of moose, the first we had seen since starting out. A paddle of two hundred yards brought us to the third portage, which proved to be a long, rough and hard one, as well as wet after the rain. The one great joy of it was to see a glint of water through the trees at the end. This is Duck lake—so called, Mr. Hammond says, because no ducks are ever seen upon it. It is a fine sheet of clear water, about three-quarters of a mile long, closed in on all sides with a dense forest. At the farther end is a portage to Kawawiagamog or Round lake,[5] and to reach it the trail crosses a rocky ridge which rises to a height of about 100 feet above the plain. Two canoes were taken across the portage, and we made a permanent camp on Round lake upon a very beautiful site in a grove of tall pines, with a wide sand beach extending in front along the eastern shore of the lake.

Mining locations at Round lake.

The afternoon was spent in examining a number of locations east of the lake, and along its western and northern shores, particulars of which are given by Dr. Coleman. Location 65K was taken up in 1876 by J. McNaughton, John McMillan and Daniel McFee. It is crossed by a mineral belt about 500 feet wide containing rich copper pyrites, a greenish-colored ore said to carry a low percentage of nickel, and ores which are reported to yield gold and platinum. Messrs. Hammond and Folger now own a two-thirds interest in this property, and one-third is held by the trustees of the McMillan estate. On the northwestern side of the lake is a location surveyed recently

[5] This lake is only circular upon the west and north sides; on the south side a peninsula extends out some distance, having a length of half a mile or more from east to west; the east side has an irregular outline. Mr. Hammond's Indian, George, told us the name should be uttered as one long guttural, with the lips well rounded and not once closed,—a sort of Indian shibboleth, it may be.

for Mr. Hammond, the country rock of which is charged with iron and copper pyrites and is said to be gold-bearing. Analyses procured by Mr. Hammond are claimed to run as high as $7 to $8 per ton in gold. The ridge on the mainland south of the peninsula, we were told by Mr. Hammond, is composed largely of red granite.

A thunder storm on Round lake.

We had an experience during the afternoon of one of the thunderstorms for which this region of country has long been famous. A dark cloud which rose out of the west had been threatening us for half an hour, and then seemed to part towards the south and north. Quickly however it came together over our heads; there were almost incessant flashes of lightning and claps of thunder; the wind blew with the force of a gale; and the rain swept over the face of the water in solid sheets. Such a dark, pelting, driving storm I have not witnessed elsewhere outside of the cyclone belt of the west; we had experience of another like it a few days later on the Mattwin river; and according to reports such storms are of frequent occurrence over that high tableland in which headwaters of the St. Lawrence and Nelson river systems have their source. We were dry enough upon shore, under cover of the canoes; but it was not pleasant to think that a tree might be blown down upon us in a woods recently fire-swept, or that a thunderbolt might crash into our midst out of the surcharged clouds. We got back to camp safely, but not without experiencing what a kittle thing a canoe is upon the water in a gust of wind.[6]

THROUGH MOSS TOWNSHIP.

The winding Kawawiagamog river.

The wind moaned through the pines all night, the waves beat a mono tone upon the sand, and a heavy shower of rain fell; but Saturday morning broke clear and cool, and we rose at five to make an early start for the Huronian mine. The wind had fallen, and these small lakes, so easily ruffled, are quick to subside. We canoed about two miles west to the outlet of the

[6]A description of one of these storms on Lac des Mille Lacs is given by Captain John Palliser in his Journals of Exploration of British North America under date of June 25, 1857. "Entered the Lake of the Thousand Isles (*sic*) at five o'clock. The air was hot and sultry, and the dense clouds lowering to the southwest betokened a coming storm. We coasted along the south shore of the lake, which is low, with protruding round masses of rock covered in some places with rough sandy gravel, till making for one of the many thickly-wooded islands we landed and encamped for the night. Night brought with it a violent thunderstorm, accompanied by magnificent lightning; its flashes were repeated at intervals of only a few seconds, and its headed appearance resembled the discharges of a monster Leyden jar." (p. 26.)

Henry Youle Hind in his Narrative of the Canadian Red River Exploring Expedition of 1857-8, vol. I, p. 54, also describes a storm on the same lake, occurring seven weeks later in the same year. "At our camp on the Height of Land (Aug. 12) an atmospheric phenomenon of singular beauty occurred. The night was very beautiful and calm. The moon shone with great clearness and brilliancy, and numerous meteors darted through the sky in the south and west. Early in the morning, before daylight, I noticed a distinct arch of what at first sight I mistook for an aurora, but, observing its position to be nearly due west, referred it to very elevated clouds illumined by the sun's light. Its appearance was like that of a dim auroral arch, well defined, and forming a complete segment of a circle to the height of forty-five degrees, its form being persistent as long as observed. The remaining portion of the sky was clear, the moon and planets shining at the time with a very brilliant lustre. It occurred to me that it might be the forerunner of a storm, an idea which the rising sun, lighting up the tops of the trees beneath a perfectly cloudless sky about an hour afterwards, banished for a few hours. Towards noon the sky became overcast from the southwest. About half-past three thunder was heard in the distance, and at four scud from the southeast began to traverse the sky. At five p.m. the clouds in the southwest presented a very magnificent spectacle; they seemed like gigantic waves setting towards the northeast. This wavelike appearance occurred in different parts of the heavens, and almost every variety of cloud

lake, a small stream known as Kawawiagamog river. For the first mile of its course, or until it enters Cross lake, this river is a series of rapids, falling about twenty feet. There is a rough portage through the woods to Cross lake, the whole length of it being strewn with angular boulders. The lake is only a half-mile long, with rock forming the shores of the upper and marsh the shores of the lower end. Doubtless it at one time had a length of several miles, but the basin has become filled with silt and vegetable mould and now sustains a vigorous growth of coarse grass.

A bright little stream from the south, the outlet of Twin and Fountain lakes, joins the Kawawiagamog a short distance below Cross lake, where the river channel narrows to eight or ten yards and deepens to three or four feet, and thence meanders in a southwest course through Moss township a length of about five miles (but only two miles in a straight line) to expand again into Grass lake. In this distance there are 134 bends in the stream, most of which are of sixty to ninety degrees, and where the turns are so many in so narrow a channel the canoeman must be always alert if he would keep the prow of his craft out of the muck. A canoe indeed requires to be watched every moment: it is the most manageable of little boats, if one knows the art of management, and it responds instantly to every move and poise of the paddle; but it is also liable to go wholly and disastrously wrong if vigilance be relaxed only a moment. Our men were skilful and vigilant, and there was no mishap.

Moose and duck.

The marsh through which the river flows is about a half-mile in width —in some places less and in others more—and the luxuriance of the vegetation probably makes it fine feeding ground for moose. The trails of these animals down to the water were observed at a number of points, and looking at the boggy nature of the ground one wonders how they escape being mired. But the moose possesses great strength, and its wide spreading hoofs furnish a relatively good support upon the network of roots of the grasses and plants which grow so rank in a peaty soil. Wild rice is plentiful in the shallow

passed in review. A few minutes before five p.m. a very long and vivid flash of lightning shot across the sky in a direction from south to north, succeeded by a distinct snap like that produced by an electrifying machine. About ten seconds afterwards the loud rolling thunder recorded the flash, and at five p.m. the rain commenced; the lightning was intensely vivid, and the thunder unusually loud."

Another account of a storm is furnished by Wolseley in his Narrative of the Red River Expedition of 1870, first published anonymously in Blackwood's Magazine for December, 1870, and January and February, 1871, and subsequently with the author's name as No. II in the series of Travel, Adventure and Sport. The little army was encamped near McNeil's bay at the foot of Shebandowan lake, awaiting the transportation of eighteen miles by water to the portage across to Kashabowie lake. "Strong westerly winds prevailed on lake Shebandowan whilst the final arrangements were being made for our start, so that upon some days such a sea came rolling in and breaking upon the shore that it was impossible to load boats, or to get them off had we even succeeded in equipping them. Most fortunately these 'blows' seldom became powerful until about nine or ten a.m., and generally wore themselves out towards four or five p.m., so that we had always several hours in the morning and evening for pushing on our work. On the night of the 15th July we had the most violent thunderstorm experienced during the entire operation. The heavens seemed at times as if to open and let fall great crushing weights of exploding substance upon the earth beneath, which they struck with blows that made all nature shake and tremble. Then followed what is commonly known as rain, but which in this instance was as sheets of water tumbling upon us in rapid succession, beginning suddenly and ending as abruptly." (p. 266.) Previously in the same Narrative (p. 240) Wolseley writes: "Of all known parts of the world it may be truthfully stated that the Thunder Bay region is the most subject to violent thunder storms —whether owing to metallurgic influences or to geographical position we do not know. Many officers who had been 'all over the world' admitted that they had never heard such appalling claps of thunder before. On some occasions trees were blown down, and on others they were split into shreds. At times, especially at night, the noise was such that the ground seemed to shake, and it sounded so close that one expected to see the tent-pole riven in two."

waters of Grass lake, and ducks as well as moose haunt them to feed upon the heads of grain. It was noticed in Silver lake that moose had grazed the rice crop so close that hardly a spear was to be seen above the water.

From Grass lake there is a portage of about 200 yards towards the northwest through timber to Jackfish lake. This is a fine sheet of clear water, irregular in shape, a mile wide, and two or three miles long, draining into Grass lake, and is thickly wooded on all sides. From the farther side, about two miles from Grass lake portage, a road leads over low ground about a mile and a half to the Huronian mine. It was well constructed, although corduroyed for a large part of the way; now it is grown up with bushes, and only a path remains. The Jackfish lake end of it was only built so that pine logs cut around the shores of the lake might be drawn to the saw-mill at the mine. The road proper started at the west end of lake Shebandowan and ran northwestward between Round and Twin lakes, thence westward across the narrows of Cross lake, through the timber north of Kawawiagamog marsh, and between Grass and Jackfish lakes to the Huronian mine, a length of thirteen miles. In 1887 the Government built a road from Baril portage on Lac des Mille Lacs, a distance of fourteen miles southward into Moss township, at an expenditure of $8,456, leaving the owners of the mine to build the remaining section of five miles to their property. From Savanne to Baril portage there is uninterrupted navigation for tugs and small boats, and the new road would doubtless have greatly facilitated the operations of the company had not other causes interfered to bring their enterprise to an end. "The first seven miles of road made are through a rough, broken country, but the remaining distance is through a better district, containing some very fair agricultural land."[7] The terminus is about one mile south of Iron lake, in Moss township.

Grass and Jackfish lakes.

The Huronian mine roads from lake Shebandowan,

and from Baril portage.

THE HURONIAN MINE.

The first discovery of gold in this region was made in 1871, when a location numbered H 1, containing 160 acres, was surveyed, and on 7th November a patent was issued therefor to one Neil White. Many other locations were taken up subsequently along the same range of green Huronian schists, the strike of which is northeast and southwest, but it was not until 1875 that the township was laid out.

First discovery of gold in Moss township.

Huronian mine, originally known as Jackfish mine, is on H1. Entering upon the location by the road from Jackfish lake, one ascends through coppice and briers to a naked ridge of rock which extends in a southwesterly direction, with a valley or gorge on either side converging with their tiny spring-fed streams at the stamp mill about 300 yards farther west. From the highest point here the eye takes in an area of thirty or forty acres, over which the timber had been cut when developing and mining operations were carried on, but which is now covered with second growth. A frame building in front was the manager's office and quarters, with the assay office just beyond it; while to the right is a long low-roofed log building which had

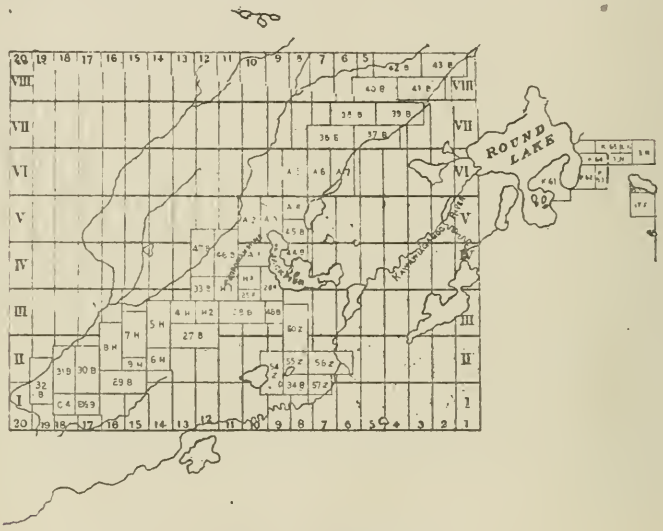
Huronian mine location.

Offices and buildings.

[7] Report of the Commissioner of Crown Lands, 1887, p. 54.

been occupied as the company's store, besides stables and other buildings. Down in the narrow dell upon the north side, now secluded in the second growth, is a cluster of log huts which, no doubt, had furnished quarters for employés; on the right, looking down stream, a solid wall of rock rising seventy or eighty feet and crowned with primeval forest; on the left, rising thirty or forty feet, the softer form of the Huronian ridge, rounded by ice action, and showing glacial scratchings wherever the rock is exposed. On the slope of this ridge, a hundred yards or more from the men's camp, stands a tall frame building which is at once recognized as the shaft house. Here is an engine in fairly good condition yet; the shaft is nearly full of water; and the ore-dump outside has been picked over so often during the last ten years

The vein, shafts,



Map of Moss Township.

that few samples are left worth carrying away. The vein is in the brow of the ridge, and the quartz where exposed at the surface has a width of less than two feet. It appears to run with the formation, but Dr. Bell says it cuts the strata at a small angle. A second shaft was commenced upon it about 100 yards west of the first, but the depth to which it was sunk is not known. A tramway about two hundred yards long connected the shaft-house with the mill, over which the ore was delivered. The mill building stands under the south bank, a short distance below the junction of the two streams already mentioned. It is a frame structure, in a fair state of preservation, and is equipped with two five-stamp batteries, three Frue vanners and engine and boiler from the works of Fraser and Chalmers. A portable saw-mill is attached, which was driven by the same power, and the piles of lumber standing near by show that it had done a considerable work. The large quantities of chemicals stored in various buildings upon the premises indicate that the company had been arranging to put in a chlorination plant; but why they did not, and why the works were closed down, nobody now living appears to know very certainly. The generally received account is

and mill.

that it was owing to disagreement between the president of the company, the late James McLaren of Buckingham, and the manager, the late T. A. Keefer of Port Arthur.

History of the enterprise.

The Reports of the Geological Survey are singularly silent on the whole enterprise, almost the only reference to it which they contain being found in a sentence or two written by Dr. Selwyn, which Dr. Coleman quotes[8] In September, 1885, I obtained the facts woven into the following account from Peter McKellar of Fort William, who had been identified closely with the location since the first discovery of gold upon it; and at that time all the steps taken to mine and mill the ore were fresh in his memory:

Peter McKellar's account.

"The vein consists of chloritic and talcose slates in the Huronian formation, and outcrops at several places five to eight feet wide. It was opened out in 1871, and a half interest sold to Messrs. Frue and Sibley of Silver Islet. Some work was done in that and the following year, and a road thirteen miles in length was cut to lake Shebandowan. In 1874 the proprietors organized as the Jackfish Lake Mining Co., and a little work was done on this and other properties. But no substantial work was done until 1881. In that year one and a half tons of ore was taken out and sent to New York for assay by Frue vanners and amalgamation. The test showed $26 of free gold to the ton, and $23 additional in sulphides. In that year a company was formed, composed chiefly of Ottawa capitalists. The sum of $50,000 was paid for the property, and $50,000 additional was put in as working capital. Mining was commenced in March of 1882, with Mr. McKellar in charge as superintendent. Buildings were erected and a ten horse-power engine put in, with Blake pump and rock-breaker, ten stamps, four Frue vanners, and two copper amalgamators. Between thirty and forty men were employed up to October, 1884, when work was stopped until August, 1885. It is now (September 20, 1885) in full operation, employing forty men, whose wages range from $30 a month, with board, to teamsters and other laborers, to $35 a month to carpenters and miners. Mr. Eschweiler is in charge as superintendent. A shaft has been sunk to a depth of 130 feet, the richest ore being found at a depth of 100 feet. At a depth of 55 feet one level has been driven upon the vein a length of 150 feet, and one is now commencing 55 feet lower. About 700 tons of ore have been milled and 40 tons of concentrates obtained, averaging $150 per ton, in addition to $1,000 of free gold."[9]

The sample lot sent for treatment to New York appears to have averaged $49 per ton, whereas the 700 tons milled under Mr. McKellar's management yielded an average of only $10 per ton. It is quite likely however that the ore sent to New York was selected, and did not represent a fair average; otherwise, the presumption must be that a large proportion of the gold was lost in the mill run, and this is less likely than the other. At $10 per ton from a vein five to eight feet wide, the property should pay handsomely with the use of modern processes.

[8] See *ante*, p. 80.

[9] Bureau of Industries Report, 1885, p. cxxxviii.

Dr. Bell's account.

The following further account of the Huronian mine is furnished by Dr. Robert Bell in the Report of the Mining Commission, published in 1890 :

"The first discovery of gold in notable quantity was made in 1871 by Mr. Peter McKellar (following up a clue obtained from an Indian) near Jackfish lake, at what is now called the Huronian mine, situated on location H1 in the township of Moss. It here occurs in a true and persistent vein from 6 to 8 feet wide, of which from 2 to 5 feet are quartz, the rest being incorporated schist. The country rock consists of interbedded talcoid, chloritic, dioritic and a little dolomitic schist, siliceous magnetite and massive diorite, all dipping northwest at angles of 65° to 80°. The vein runs northeastward, cutting the strata at a small angle, and underlying to the northwest side at an inclination of 15° from the perpendicular. Intrusive syenite appears about a mile to the northeast of the mine, and this may have had something to do with the enrichment of the vein. The gold occurs free and as sylvanite (or telluride of gold), associated with galena, iron and copper pyrites and blende, which, with the white quartz, constitute a beautiful looking ore. A ten stamp mill was erected in 1883 at great expense, on account of the difficulty of transportation, and in 1884 some mining and milling were done. The gold is understood to have been equal to $21 to the ton, which was however far short of the whole amount contained in the ore. Work was resumed for three or four months in 1885, but from the want of proper means of transportation to the mine operations are for the present suspended. Openings have been made and similar ore obtained from a continuation of the same vein, called the Highland mine."[10]

This account differs in some respects, and notably as to the richness of the ore, from the account given by Mr. McKellar to myself in 1885. Dr. Bell's statement of the gold contents is probably based on the New York test, and not upon the results of the mill run at the mine. But the ore of the Huronian mine is also said to contain silver in promising quantities, which Dr. B. says "was practically overlooked in the efforts to extract the gold."[11]

[10] Mining Commission's Report, p. 25.

[11] Ib. p. 28. It is difficult to reconcile all statements. In a recent letter from Mr. McKellar he says: "In regard to the Huronian mine, I was in charge in 1883 and 1884. I was in charge and mined and milled 700 tons of ore. The bullion (gold and silver) taken off the copper plate was nearly a thousand dollars; and the concentrates from the 700 tons weighed about 40 tons. Five tons of the concentrates sent to Balbach & Son, Newark, N.J., for reduction, showed a value of about one hundred dollars a ton. The certificate gave: Concentrates 10,525 lb. gross=9,747 lb. net; copper, 1.56 per cent.; gold 3.72 oz and silver 27.82 oz. to the ton of 2,000 lb. It should be considered during this operation that for want of development room all that came out of the shaft and drift, rich and poor, had to be put through so as to keep the mill going full time. Half of it was schist that is much lower in grade than the quartz, and should not be put through a small mill like that one. When work was stopped the shaft was down ready for opening the second level both ways, after which the mill could have been supplied easily with selected ore; but the works had to be closed at a moment's notice to get the men out before the freeze-up. The following year another party was sent in to make a test. They took the concentrators away and undertook to take in a chlorination plant, in which they failed. They also started mining a small branch vein, which I would not think any sane man would work in preference to the main vein that shows so much stronger and richer. Transportation was and is yet too expensive for the mine to pay working; but with transportation easy, and a large mill to treat the ore, this mine would, I believe, pay well." And again Mr. McKellar writes concerning the operations in 1885: "I was at the mine once in October, 1885, some little

Dr. Selwyn, who visited the location, says the vein can be traced several hundred yards, and thinks it is four or five feet wide.[12]

We returned by the same route to our camp on Round lake late in the evening, and had a rough experience crossing the lake. Next day at 11 o'clock we reached the camp on lake Shebandowan, through a storm of wind and rain. The total distance from the mouth of Kashabowie river to the Huronian mine is 24 miles, made up as follows in miles and chains : Returning to lake Shebandowan.

	m.	ch.
On Shebandowan lake, s.w.	8	00
Portage to Mink lake, n.w.	..	50
Mink lake, n.w.	..	10
Portage to Silver lake, w.	..	16
Silver lake, n.w.	..	9
Portage to Duck lake, w.	..	50
Duck lake, w.	..	60
Portage to Round lake, n.w.	..	60
Round lake, w.	3	00
Portage to Cross lake, s.w.	1	20
Cross lake, s.w.	..	40
Kawawiagamog river, s.w.	5	00
Grass lake, n.w.	..	20
Portage to Jackfish lake, n.	..	10
Jackfish lake, w.	1	40
Road to Huronian mine, s.w.	1	40
Total	24	25

SOUTH OF LAKE SHEBANDOWAN.

Sunday we rested, and at 6.30 next morning (Aug. 19) we broke camp on lake Shebandowan. Dr. Coleman, Mr. Hammond, myself and three canoemen—Nicol, George and Reddie Patterson—proceeded across the lake for the Mattawin river district, and the other members of the party returned through Kashabowie and Lac des Mille Lacs to Savanne. We had two canoes and a light outfit, as it was known that the route was heavy, and we hoped to be able to complete it in three days. By making an early start it was expected that we could get over the longest water stretches before the wind arose to interfere with comfortable progress, but in this we were not wholly fortunate owing to some delay in finding the first portage.[13] Planning the next excursion.

time before the close-down. They were stoping and milling the 8 ft. schist bed with the stringer of quartz. They told me the concentrates would go some $50 a ton. There was but little amalgam showing on the plate. They had a few miners working on the main vein in the shaft, driving the second level at the depth of 100 feet. This level was mined along the vein from the shaft some 40 to 60 feet each way when I was there. The vein looked well along the run and in both headings. There was no work going on in the first level nor any stoping. It is true that there was a rupture between Mr. Keefer and the company, for the latter refused to pay the men, or the bills of supplies, or even defend the law suits brought against them. So judgment was given against them in every instance, and the sheriff seized on all the loose property of the company and was going to sell it. When I saw the way things were going I went to Ottawa and explained to the directors how the matter stood—how the loose property would be sold for little or nothing and the debt would still stand against the company. Then they agreed to settle the matter, and sent Mr. R. Blackburn with me to Port Arthur, and he squared up everything. The company did not appear to know anything about the results of the mill work or the yield of the concentrates sold."

[12] Mining Commission's Report, p. 66.

[13] The west wind blows with great regularity on all these lakes from Shebandowan to Lake of the Woods during the summer months, rising usually about nine in the morning and falling about five in the evening.

Loch Earne.

From a small bay on the south side of the lake, about two miles from the mouth of Kashabowie river, a portage a quarter of a mile long leads across into a little blue lake bearing the Scotch name Loch Earne. It is said to be very deep, and better stocked with trout than any other water in the district. By the shore line it appears as if cut off into three distinct bodies of water, with two narrow connecting necks; but in reality it is only one body, without any change of level.

A mining location on the south side of Loch Earne was exploited twenty years ago for gold by cutting a trench through gravel drift for a distance of fifty yards from the shore. There is no appearance of a vein here, and whatever quartz there is has been obtained from float boulders. The property is said to be owned in Fort William, and to be held at $20,000.

Greenwater lake.

We paddled back to the middle section of the lake and made a portage of a quarter of a mile west through burnt timber to the east arm or bay of Greenwater lake. This is the largest expanse of water in the district through which we proceeded south and east of lake Shebandowan. Its waters are beautifully clear, with a shade of green that no doubt suggested the name. On Russell's map the height of land is shown as running between Greenwater and Shebandowan lakes, but the accurate topographical survey made by Hume Proudfoot in 1892 leaves no doubt that the height of land is south of Greenwater, and that the latter discharges by a small river into lake Shebandowan.

Our course was west about a mile and a half, and then south between a large island[14] and the mainland through a narrow and picturesque channel into the main body of the lake. The lake opens to the west and south five or six miles, and by the time we entered this portion of it the west wind had risen and there was a lively show of whitecaps on the course before us. Running in the trough of the sea, the waves often broke over the low gunwale of the canoes, but we got through without anything more serious than a little wetting, and turning a point of land on the east shore we entered a narrow bay and up a sluggish stream to the inevitable portage.

An extensive body of iron ore.

It was after ten o'clock when we got out of Greenwater lake, and Mr. Hammond advised that this was a good spot for dinner. Accordingly Nicol, George and Red began the culinary duties, while Mr. Hammond suggested that the doctor and myself should take a stroll with him into the woods. We proceeded along the base of an escarpment of rock which rises perpendicularly about thirty feet, and at the first easy point made the ascent of it. The rock is a dark hornblende, not particularly interesting; but presto! there was a change; the doctor's hammer came down and broke off a lump of iron ore. Mr. Hammond had planned to give us a surprise in his modest way, and he had several others in store as we discovered before the trip on which we had entered was finished. We came to learn indeed that he is a very modest man for a mining prospector, and that unlike many of his class he exaggerates nothing. We measured the ore body and found it to be 48 feet wide, but the length was not ascertained; Mr. Hammond informed

[14] Called Rocky island on Proudfoot's map. The outlet of the lake is half a mile northwest of this island.

us that it is at least a quarter of a mile. On the face of the bluff the ore shows down to the base; how much deeper it is can only be ascertained when it is worked. Hornblende forms the wall upon the east side, and a band of diorite about 25 feet wide the wall on the west, beyond which hornblende schist comes in again, but some ore is interbedded with the schist. Mr. Hammond discovered this deposit in 1892 and five locations (R526-530) have been surveyed, with an aggregate area of 1,000 acres; the patents however have not yet been taken out. The ore is magnetic, and analyses are said to have given 51 to 53 per cent. metallic iron.

Greenwater lake to Matta win river.

The creek upon which we had entered is the outlet of a series of small lakes and marshy ponds extending eastward about six miles, the course of which in low water steadily increases in difficulty as the ascent is made. At an early stage we were obliged except in the larger lakes either to drag the canoes through the shallow water, sinking to the knees in mire, or to make portages in dense woods where a trail was hardly visible; and this continued until the height of land beyond Boulder lake was reached. Thence to the foot of Copper lake, where we camped for the night, the route was easier. Following is the day's itinerary as furnished by Mr. Hammond:

The day's itinerary.

	m.	ch.
Shebandowan lake, s.e	2	00
Portage to Loch Earne, s	0	20
Loch Earne, s.e	1	40
Portage to Greenwater lake, w	0	20
Greenwater lake, w. and s	5	00
Creek to portage, e	0	10
Portage around rapid, e	0	3
Creek to decharge, n	0	20
Decharge to marshy lake, e	0	15
Marshy lake to portage, n.e	0	20
Portage to marshy pond, e	0	9
Marshy pond to portage, e	0	12
Portage around low water in creek, s.e	0	40
Creek to Long Point lake, e	0	40
Long Point lake, e	1	40
Portage to small lake, e	0	16
Small lake to creek, e	0	5
Creek to portage, e	0	40
Portage to small lake, e	0	6
Small lake to portage, s	0	10
Portage to beaver pond, e	0	4
Beaver pond to creek, e	0	40
Creek to portage, n.e	0	10
Portage to small lake, n.e	0	22
Small lake, e	0	40
Portage to Boulder lake, s.e	0	5
Boulder lake to portage, e	0	30
Height of land portage, s.e	0	33
Miry lake to portage, e	0	50
Portage to Copper lake, e	0	13
Copper lake, s.e	2	40
Total	19	13

This distance is composed of thirteen lakes and ponds, 14 miles 7 chains; four sections of creek, 1 mile 40 chains; and thirteen portages (including one decharge), 2 miles 46 chains.

Eight small lakes and ponds, the last and highest of which is Boulder lake, are drained by the creek we ascended from Greenwater lake; while the waters from Miry lake eastward are conveyed through a creek of unknown name that we descended into the Mattawin river.

The land and the timber.

As far as could be seen there is no good land in the region through which we passed, and no valuable timber. Spruce is plentiful in some places, but does not attain to large size, and there is one small area of pine near the height of land: the ground is covered with green moss, and along some of the portages the undergrowth is dense. Some shows of iron ore are said to occur to the south of Boulder lake, but we did not visit them.

IN THE MATTAWIN VALLEY.

Copper lake.

Copper lake, the second body of water along the chain east of the height of land, has a length of two and a half miles, and at the eastern end is narrowed along the line of contact between granite and Huronian schist. At the outlet it is rock-rimmed, the water flowing through a channel two feet wide, a foot deep and three feet long, to fall about twelve feet into a narrow gorge that has been cut back through a ridge of very hard banded slate not more than a hundred feet wide. One might suppose that a very few years would suffice to complete the cutting back into the lake, the result of which would be to lower its level ten or twelve feet; only one does not know how long it has taken the water to wear the gorge back to its present station—possibly as long as it has taken the Niagara river.

It rained at intervals through the night, but Tuesday morning was clear and cool. We were astir at 5.30 and left camp at 7, taking a due south course over a portage of three-quarters of a mile to Keek-keek or Hawk lake.

In the track of a wind storm.

The trail could not be followed for more than half the way, as all the timber had been blown down by a wind storm which swept across the country two or three years ago. Mr. Hammond told us that two of his men narrowly escaped being caught in this storm. They were close to the portage at the time, and such was the wreckage of fallen trees in the wake of the gale that it took them more than half a day to cross from Keek-keek to Copper lake. Its course was from west to east, keeping along the north side of Keek-keek lake, and we observed its track for a distance of several miles. Only the hills and higher ground appeared to have felt the force of the blow; the intervening low lands were passed over unharmed. It would seem also that the wind was not cyclonic, for the whitened trunks of the trees lay parallel with each other on the hillsides, like sheaves of wheat on a harvest field, and not in every possible direction as occurs in a real cyclone.

Keek-keek lake to

The canoes were put into the water again where the portage trail comes to the creek flowing down from Copper lake, about 450 yards from its mouth. The channel has a tortuous course through a border of willows and coarse grasses, but finally opens into a round sheet of water with a high and

Rat Portage in 1851, p. 170. Reproduced from a sketch by Dr. Bigsby.

Hudson's Bay Co. Fort at Rat Portage, on Old Fort island, 1857, pp. 168 and 171. Reproduced from a sketch by H. Y. Hind.

Sultana bay, north side of Sultana island, p. 177. From a photograph by Miss Alice M. D. Fitch.

Crown Reef vein, Sultana Mine, p. 179. From a photograph by Miss Alice M. D. Fitch.

Gold Hill Mine and Mill, p. 172 From a photograph by Dr. George M. Dawson.

bold shore of rock on the south side. This is the upper section of Keek-keek lake, and passing southeastward through a gap the main body of the lake is seen to extend to east and west a length of five or six miles, with a breadth of one to one and a half miles. Several pairs of hawks were observed circling high up in the air over the lake, and three or four nests were seen in the tree tops along the southern shore, which no doubt accounts for the origin of the name of the lake.

the Mattawin river.

From Keek-keek lake the stream broadens to river dimensions, with rushes and wild rice along the greater part of the way to its mouth in Mattawin river, and there are stretches of excellent canoeing. At the foot of Blossom lake is a band of granite, over which the river tumbles in a pretty mass. The volume of water is not large, and three miles below the falls it contracts to a narrow rushing stream, strewn with ugly boulders. A short portage around the base of a high ridge of rock leads to another stretch of level and deep water, and in a swampy valley covered with willows, grasses and rushes, we floated into the Mattawin almost without perceiving it.

THE QUARTZITE GOLD LOCATIONS.

Up Gold creek.

Half a mile below the junction we landed and had dinner; and thence half a mile farther we reached the mouth of Gold creek, which flows down from the north. The valley of the Mattawin is here quite wide, but it is low and marshy. We turned up Gold creek, a sluggish stream about twelve yards wide, with borders of willow on either side. The channel is three or four feet deep, and there is good canoeing through low country for three miles. Then come rocky shores, with high ranges inland, and shallows over which the canoes were pushed another mile to a small island below the first falls, where we landed and pitched our tents. The river divides into two streams at the falls, and descends over rock sloping at an angle of 45°, the effect of which must be fine when the water is high. Tracks of moose were seen frequently in coming up the stream, and the water lily was closely cropped all along the banks. Bear tracks were also observed crossing the creek at several points.

The Quartzite gold locations.

There is a miners' camp or shanty at the falls, on the west side of the creek, and a small clearing has been made around it. This is location AL 61 of what is known as the Quartzite gold mines. Several paths or trails were found leading from the camp westward and northward, all of which we followed—to the west half a mile, and to the north along the creek a mile. Four prospecting pits have been opened in the bluffs along the river towards the north, in the county rock, which contains iron pyrites in minute particles. There is certainly a great body of rock, and the owners claim to have got assays showing $2 to $7 of gold per ton. The two largest pits are on the west side of the creek, about half a mile north of the camp, but the extent of the workings is too limited for a safe opinion to be formed of the value of the property.

The itinerary. Following is a record of the day's march, as supplied by Mr. Hammond:

	m.	ch.
Portage from Copper lake, s.	..	60
Creek to Keek-keek lake, s.e.	..	20
Keek-keek lake, e.	3	00
River to Blossom lake, s.e.	5	00
Blossom lake, e.	1	00
Portage around falls, e.	..	3
River to portage, s.e.	3	00
Portage around rapids, s.e.	..	24
River to portage, s.e.	..	20
Portage around rapids, s.e.	.	3
River to Mattawin junction, s.e.	..	60
Mattawin river to Gold creek, e.	1	00
Gold creek to "Quartzite mine," n.	4	00
Total	19	30

THE MATTAWIN IRON RANGE.

A walk across country. Tuesday night was uncomfortably cold, and upon rising early Wednesday morning we found that ice had formed on a basin of water alongside the tent. The two Indians were sent down stream with the canoes, and were instructed to meet us at the foot of the second falls on the Mattawin river, where that stream is crossed by the Mattawin iron range. The other members of the party left camp at 6 25 a.m., going eastward on a well-cut and easily travelled road through a forest of jack-pine; for the greater part of the way a region of sand and gravel too poor and dry for the nourishment of thrifty trees, with natural glades at intervals, and rarely a stream of living water.

Hill No. 8. At the end of a steady walk of nearly three hours we reached location W222, known as Hill No. 8 of the Mattawin iron range, owned by the Mattawin Iron and Mining Co. A trail a quarter of a mile long leads from the road to the top of the hill, rising gradually to a hundred feet above the plain, and following it we came to the outcropping of ore. From this height a commanding view is obtained of the country towards the south and southeast; and among the prominent objects visible is the Mesabi iron range, fifteen miles or more away, which is supposed to extend from Minnesota into Ontario as far as the head of Thunder bay. Eastward is a succession of high hills, some of which we crossed later in the day, the nearest being a mile distant and rising considerably higher than the ridge on which we stood. The ore of No. 8 hill is hematite, of banded structure, and mixed with some jasper on the west side. On the east side are two terraces of ore with perpendicular faces at one point, each of which is about thirty feet in height. We measured a cross-cutting near the northern end of the ore lens and found it to be 400 feet; another cross-cutting farther south is said to be 480 feet, and the length of the ridge is about half a mile. Two pits have been sunk upon the summit to a depth of ten feet, showing clean ore, and analyses are said to give 55 per cent. of metallic iron. From the east side this hill of ore might be worked as an open quarry for half its length.

We were told by Mr. Hammond that he had explored several other large shows of iron ore on the same range farther west, but for lack of time we did not visit them.

Hill No. 7. Hill No. 7 is on location W221, a mile east of No. 8, and rises 180 feet above the plain as measured by an aneroid barometer. Jasper is more conspicuous than in No. 8 upon the west side of the hill, and the ore is leaner, but on the east side it is of good quality. The ore lens is 485 feet wide, and Mr. Hammond says the length is fifteen chains. Borings were carried on here with a diamond drill about three years ago, the records of which have been furnished me by Mr. W. W. Roche, who had charge of the drill.

Exploratory work with a diamond drill.

First boring on northeast side of hill, at an angle of 45° north :

	feet.
Ore and rock mixed	48
Ore	12
Black rock	5
Ore	5
Black rock	20
Ore	55
Jasper	1
Ore	5
Jasper and black rock	15
Ore	6
Jasper and black rock	11
Ore and rock mixed	2
Ore and slate mixed	39
Diorite	36
Total	260

Second boring on top of hill, at an angle of 60° south :

	feet.
Ore and rock mixed	88
Ore and jasper mixed	4
Jasper	1
Ore and rock mixed	101
Black ore	1
Red ore	26
Rock	1
Black and red ore mixed	10
Rock	1
Black and red ore mixed	10
Rock	12
Ore	1
Rock	2
Ore	22
Total	280

Mr. Roche says of the second prospect that it "showed very rich ore, which was struck at 194 feet and continued good with some small bands of rock between until the hole was finished at a depth of 280 feet. As the drill we had would only bore to a depth of 300 feet, it was impossible to determine the extent in width or depth to which the ore would run."

Leaving No. 7 Hill we descended by a road towards Mattawin river, passing No. 6 on our right. The river was reached at the second falls, where

Hill No. 5.

the Indians were awaiting us with the canoes, and crossing over we ascended Hill No. 5, on locations 218W and 219W. Here there is a high outcropping of slaty ore fifty feet wide and a quarter of a mile long, with jasper on the west or foot wall similar to No. 7. The strike of the ore body is east and west, and the dip 85° north.

Falls of the Mattawin.

The first and second falls are on location 219W, and the third is about half a mile below the second. Each of the three falls has a height of about twenty-five feet, and they would doubtless supply ample power to generate electricity for driving mining machinery and operating a very considerable length of railway besides.

Junction of Shebandowan and Mattawin rivers.

We descended the Mattawin from Hill No. 5 half a mile to the third falls, on the south side of which is a portage of about 300 yards. A barrier of stones in the channel below these falls makes canoeing unsafe in low water, and perhaps even at flood-time, and landing upon the left bank we portaged along the road built out to the mining locations, through a fine forest of poplars a mile and a quarter to the mouth of the Shebandowan river. This is the outlet of Shebandowan and its tributary lakes, and its clear blue waters rush down with great force to join the brown waters of the Mattawin. The two rivers are of nearly equal volume; yet the numerous sand bars and buttresses of stone make the task of running and guiding canoes more hazardous below than above their junction. Both banks are well timbered with poplar, spruce, balsam, jackpine, etc., for the next three miles, or as far as Hill No. 1 (location 211W) of the Mattawin Iron and Mining Company. Here we landed on the south bank, and found lodgings for the night at a shanty built for the housing of the company's miners in the winter of 1893.

Hill No. 1.

Hill No. 1 is half a mile southwest of the miners' camp. The ridge is a quarter of a mile long and the outcropping of ore 50 feet wide. At the surface, where some work has been done, it presents a beautiful exhibit of jasper breccia, with some iron ore and chert intermixed. In the first five months of 1893 development operations were carried on upon the property, and besides pits and cross-cuttings a shaft of 56 feet was sunk, 8 by 10 feet inside the timbers. Mr. Hammond informed us that the jasper was disappearing and the ore growing richer as work upon the shaft proceeded, but the company was not disposed to expend more money on the work at that time.

Extent of the Mattawin iron range.

The Mattawin Iron and Mining Company has had surveys made of nineteen locations on the Mattawin range, from 211W to 229W inclusive, the whole distance from east to west being seven miles and the aggregate area 4,480 acres; but it has taken out the patents for only seven locations, having an area of 1,600 acres. Mr. Hammond has taken up for himself locations 152E and 153E east of No. 1 Hill; and he has traced and prospected the iron range from the last named location due west to Greenwater lake, and thence southwest to Hunter's island, and reports shows of ore at frequent intervals over its entire length. His belief is that the Mattawin range in its course eastward joins the Mesabi, probably at some point east of the Kaministiquia river. It is also probable that in its southern extension to and across Hunter's island it connects with the Vermilion iron range in Minnesota.

POSSIBILITIES OF AN ELECTRIC RAILWAY.

Reference has already been made to the utilization of the Mattawin falls as the source of power for working mines and railways. The projectors of the Ontario and Rainy River Railway had in view two or three years ago the construction of that road from a point at Sand lake on the line of the Port Arthur, Duluth and Western Railway northwest to the iron ore deposits on the Atik-okan river; but since the more careful exploiting of the Mattawin range they are disposed now to start at a point nearer Fort William, probably at the crossing of the Kaministiquia river, locate the line west along the Mattawin iron range to Greenwater lake, thence through Moss township in an almost direct line to the Atik-okan range, and thence down the valleys of the Atik-okan and Seine rivers to Rainy lake and the fertile lands of Rainy river. It is reported that a route favorable for railway construction is obtainable for the eastern section along the course here indicated; and besides the likelihood of securing the carrying trade of the mines, which is a consideration of first rate importance, there is the possibility of operating the line as an electric railway with power derived from Kakabeka falls on the Kaministiquia, the three falls on the Mattawin, and a succession of falls and rapids on the Atik-okan and Seine, besides other intervening streams; and if there are sections in which water power is lacking, stationery steam engines could be established for generating electric energy, using cheap steam coal for the purpose. In a country so well supplied with water power as this region of Ontario, it appears to be almost certain that an electric railway can be constructed and operated at considerably less cost than a steam railway. The chief objection to an electric railway heretofore has been the loss of power or energy by transmission, but it is claimed that with the latest improvements power may be transmitted 25 miles at a loss no greater than 25 per cent. With the steam engine, Maxim points out in a recent magazine article, it is necessary to propel over the line a very heavy locomotive and a large supply of coal and water. In the electrical locomotive the engine can be much lighter, and of course the coal and water can be wholly dispensed with. Therefore he says we can have in the electrical locomotive cheaper power and a very much lighter train to propel, while the reduction in weight will also greatly reduce the wear and tear of the line. Electricity could be employed on any existing road, but where special roads are constructed a comparatively cheap line will serve the purpose, "and as the electric train would be vastly lighter than the steam train, expensive grading and tunnelling would not be necessary. The line might follow approximately the contour of the country. In the steam-driven train," this distinguished inventor proceeds to say, "great power is required to enable it to mount even a slight gradient, and all this energy is wasted in heat and friction on the brakes in descending the next grade. The extra amount of energy consumed by an electrically-driven train in mounting a gradient could again be utilized in descending the next gradient, because the descending train, moving at a high velocity, instead of having its speed checked by the use of brakes, could turn a switch in such a direction as to convert the motors themselves into generators which would actually send a

Ontario and Rainy River Railway.

Advantages of electric power to operate the line.

current into the line which would be available for the use of other trains. The storing of energy developed by a descending train has always been a desideratum ; it is quite impracticable to use it with our steam-driven trains, while it is a simple matter in trains driven by a cable or by electricity." [15] There would of course be difficulties in the way of keeping a railway open in this northern country during the long winter, but they are not likely to be insurmountable, and the electrically-driven railway has advantages which the steam driven railway does not possess.

BACK TO SAVANNE.

Thunder storm on the Mattawin.

An ominous thunderstorm came up in the evening, during our visit to No. 1 Hill, and heavy rains fell at intervals during the night and early morning ; but the accounts afterwards given by the members of our party on Lac des Mille Lacs showed that it was wilder and of far greater violence there.

By river,

Thursday morning the sky cleared off at 7.30, and the day was fine and warm. At 9 30 we left the camp and proceeded down the river three miles in a straight line, or nearly five miles by the water, to Brown's lane. There are several rapids where the channel is either filled with boulders or partly dammed over with gravel, on two or three of which our canoes grounded. At one place about a mile above the lane we noticed an outcropping of chert along the south bank, from which samples were taken. On the north side, near the same place, is a bank of clay and sand about twenty feet high, showing distinct lines of bedding.

Brown's lane and the Dawson road to Finmark.

At 10.30 we landed and walked three miles northeast to Finmark station, packing the canoes and camping outfit, and arrived there at 12. A long mile on the lane brought us to the Dawson road, close to one of the station houses of that one-time famous highway. It was here that the Wolseley expedition of 1870 diverted from the unfinished road, going south to the Mattawin and up that river and the Shebandowan to the foot of Shebandowan lake. A short mile east on the road, and a mile northeast across ranges of high hills brought us to the station, where a few minutes later Mr. Hammond and his Indian took an east-bound freight train for Fort William ; while the rest of us boarded a colonist train carrying 400 or more laborers for the Manitoba harvest fields, and reached Savanne at 14 o'clock. The remainder of the day was occupied in getting ready for next day's journeys—Dr. Coleman for the east and home, and myself with Mr. Cameron and my son for the canoe trip down the Seine waters to Fort Frances.

Chief Peter and his band again.

The Indians from Poplar point had come in to do their shopping, and four or five wigwams were pitched near our camp. Chief Peter arrived with his younger squaw later in the day, and as patriarch of the gens he sat in state in his canoe while his wife paddled up the river. His clothes did not quite become a chief, being tattered and of many colors ; but retiring behind the bushes in a potato patch he soon reappeared with a whole suit, and on his breast a Treaty medal bearing the date of 1874. Walking up to the door of the tent where our Indians were having supper, he stood and stared rigid,

[15] Hiram S. Maxim in Cassier's Magazine for January, 1896, pp. 253-4.

like a setter when he gets scent of birds, until they handed out a plate of food and pannikin of tea, when he sat down upon his haunches and ate with great relish, using his fork like a man of society. The ten or twelve dogs which formed a necessary part of the Indian quarters seemed to haunt our tent doors all night, and next morning a few bones thrown towards one of the wigwams engaged them in a mad riot. One mangy fellow, at which every dog and Indian had a grudge, was the first to be set upon; then the fight became very mixed, like a knock down and drag out set-to in a bar room, in which each cur, like the Gow Chrom, fought for his own hand; but under the heavy and well-directed blows of an angry squaw they dispersed, and for the rest of the morning we had peace and order.

A dog riot.

Savanne to Mine Centre, on Shoal Lake.

At 10.40 Friday morning we broke camp at Savanne. Dr. Coleman went east by train, while I took over his canoes and Indians (Alec and Nicol Mainville) and started for Fort Frances. Ordinarily it is a seven days' journey; but much depends on wind and weather, and accordingly we laid in a ten days' supply of provisions. The water was favorable, but with a mild wind blowing from the south, and at 11.40 we reached Sand point. At 1.15 p.m. we set off again, to discover that in the interval for dinner the wind had risen and that the waves were troublesome beyond the point. Calling at Poplar point to get a possible supply of fish, we were lucky enough to get some moose steak instead, an Indian hunter having killed one of these noble animals the day before. We continued in a southwesterly and westerly course in the lee of successive islands, but the wind rose steadily and on the longer traverses the canoes shipped considerable water. At 5 o'clock we reached Long point and camped for the night. This archaean promontory extends from the north about two-thirds of the way across the lake, and a fine sand beach at its southern extremity makes it a favorite camping ground.

Supplies for the trip.

Poplar point to Long point.

Saturday morning our camp was astir at 5 o'clock. It was warm, but cloudy, with a smart wind blowing. The sand beach suggests that this is a good spot for bathing, although the brown water does not tempt one, and the brown leech with which it abounds terrifies one.

At 7 the wind fell and a quarter of an hour later we paddled off for the southwest. There was however only a temporary lull in the wind, which rose presently as we entered the wide traverse beyond the promontory. Far away towards the northwest the waters of Lac des Mille Lacs flow out through Seine river, but our course lay near the southern shore, where there are numerous islands and deep bays. Wolseley, who crossed this lake at the head of the Red River Expedition in 1870, describes it as "a curiously shaped and straggling expanse of water, in which there are islands without number, many being of sufficient size to have great bays stretching for miles into them. One island so closely resembles another," he says, "that it is wonderful how any of us found our way over the 20 miles to be travelled before we reached the next portage. Even the brigade, furnished with the most experienced guides, strayed sometimes for hours out of their course. Steering solely by the compass took one repeatedly into these large bays;

Long point to Baril bay.

and nothing is more disheartening than finding one's self in a cul de sac after a pull for many miles up one of these bays, and having to row back again to search for another passage."[16] I was more fortunate, for although the Indians Alec and Nicol had only been over the course one time before, on the way up with Dr. Coleman, they never faltered or wavered, but paddled straight on as if guided by the instinct of a homing pigeon.

At 9.50 we reached the end of the lake, and through a narrow passage entered Baril bay. On the south side is a new lumber camp, on the edge of a pine forest, a portion of which has been destroyed by fire. Eastward on the same shore the country had evidently been overrun by fire many years ago, and is now sparsely covered with poplar.

THE NAMAKAN RIVER WATERS.

Across the height of land into Baril lake.

Baril bay has three expansions, the last one bending south a mile and a half to a portage at its head. This portage is about a quarter of a mile long, and is on the Dawson route. It crosses a height of land, and Baril lake at the southern end of it belongs to the system of waters drained southwest through the Maligne and Namakan rivers into the southeast arm of Rainy lake.[17]

The shores at the east end of Baril lake have been burnt over, but are now covered with copse. For nearly two miles it lies east and west; then it bends northwestward and its banks contract to a width of 300 yards, and are finely wooded. Again it lies east and west, widening to half a mile or more and presents fine shore lines covered to the water's edge with a dense growth of small timber. At the western end there is a traverse of a mile and a half long and wide, and a high rocky promontory of gneissic rocks extends eastward into it nearly half a mile. Within 300 yards of the lower end the lake contracts to 50 yards or less, bending southward to the decayed dock of the Dawson route at the head of the portage. Formerly the lake had two outlets with a high bluff of rock between, but the lowering of the lake has left the western channel dry and the outflow is now wholly through the eastern channel.

Brulé portage,

The portage to Brulé lake is about half a mile long, but when the water is high canoes may be put into the creek at a point half way across. On the Brulé side the road slopes down a gravelly hill, and is in very good condition yet, the descent from one lake to the other being about 50 feet.[1]

[16] Travel, Adventure and Sport from Blackwood's Magazine, No. II, p. 277.

[17] Baril bay belongs to the Seine river system and has no connection with Baril lake. The French name is by some writers exchanged for its English equivalent, Barrel, while one traveller calls it Keg and another Bar. The waters of the lake are clear and blue, while those of the bay are brown.

[18] The following distances and levels are given in Hind's Red River Expedition, vol. II., Appendix I:

	m.	ch.	Feet above lake Superior.
Thousand Lakes to Baril portage	21	60	832.68
Baril portage		17	831.54
Baril lake	8	00	834.54
Brulé portage		21	787.52
Upper Brulé or Cannibal's lake	8	00	786.02

Brulé lake is only about a mile long and half a mile wide, and obviously it has received its name from the fire which destroyed the timber on its high banks many years ago. The second growth had attained to goodly dimensions, but it too was swept by the great fire of 1894. On the north side the banks rise to a height of a hundred feet or more, which towards the western end of the lake descend in terraces to the shore line. The profusion of purple flowers which covered these slopes presented a very pleasing effect in contrast with the blackened forest upon the opposite side of the lake. The outlet is a stream 25 to 30 feet wide, flowing swiftly towards the west and northwest in a meandering channel ; therefore clearly showing that Brulé is a distinct lake, and not a part of Windegoostigwan lake as shown on some maps and described by Hind and others. and Brulé lake.

The upper reach of Windigoostigwan lake for a mile or more is about 200 yards wide. The wind was blowing a smart breeze as we entered the wider portion, which lies east and west, and instead of camping on the north shore as we had intended we were obliged to turn towards the nearer east end, with its fine eliptical shore line and smooth wide sand beach, and pitch our tents in the edge of the thick wood there for over Sunday. Walking along the beach I saw fresh tracks on the sand which I supposed to be a dog's, but could not comprehend how a dog came to be there. "It's a link," Nicol said; and that night the tent door was closed with a little more care than usual. "It is now 8 o'clock," my note book reads, "the wind has died away, the waters have quieted down, the sky is clear, the new moon is hanging over the lake, the air is pleasantly cool, and our camp fire is blazing on the beach." Yet it is hard to repress a sense of loneliness at the thought that here one is as much cut off from the haunts of men as if he was in the middle of the Atlantic. Windigoostigwan lake.

Sunday morning broke with a thunder storm, which did not clear off until 8 o'clock. The lake was delightful for bathing, clear, and cool enough to be invigorating, the bottom of white sand sloping gently off into deep water. What a pretty summer resort this might be, were it not so far away! But there are hundreds just as good in our Northern Ontario, much nearer at hand, and a hundred years hence they may all be in requisition by people who must have summer homes and the rest and quiet which the forest affords. Resting in camp.

High terraces of gray gneiss rock on the north side of the lake, covered with poplar and Norway pine which the fire had partially destroyed the year before, invited one for a stroll when there was nothing else to be done, or no better way of passing the time. There are three long rough steps which rise to a height of nearly 200 feet above the lake, and as very little soil exists on the rocks the trees have small hold on the ground and many have already fallen since the fire. We walked eastward about 200 yards on the highest terrace and descended into a ravine thickly covered with bushes and small timber, where the moss and peat were saturated with water trickling down the rocky slopes on either side. Crossing a ridge towards the south Mr. Cameron and myself entered the valley of a spring creek which empties into the lake near our camp, and where some brownish colored animal was startled out of its lair in the trunk of a fallen tree and quickly disappeared in the

close timber. It may have been the lynx, or it may have been only a rabbit; there was no chance to see which, with the glimpse to be had of it.

In the afternoon the wind blew strong out of the west, raising quite a swell on the lake and foreboding, the Indians said, rough weather for the morrow. But Indians are not prescient above all others even in affairs of weather, in which they are commonly supposed to be very wise, and in this instance the sequel proved that they were not weather prophets.

"The devil that eats you."

I asked Nicol what the name of our lake meant, for besides knowing his mother tongue Nicol prided himself upon having gone to the mission school. Pointing to a gray island rising high out of the lake, he said, "Windigo—great giant, the devil that eats you." Asked as to the rest of the word, he replied, "Stigwan—I donno; something, I guess so." Mr. Aubrey White, the Assistant Commissioner of Crown Lands, who has a good knowledge of the Ojibway or Chippewa language, was able to tell me offhand that the name is compounded from Windigo "great giant" and Oshtigwan, "his head."[19] The origin of the name is probably to be found in the weird story told by Keating, one of a party of United States explorers who made the ascent of those waters from lake Winnipeg to lake Superior in 1823. "A more gloomy name is that of Cannibal or Wandigo lake, which is derived from the unnatural deed which was perpetrated in its vicinity. It is said that a party of Indians belonging to Oschekkamega Wenenewak or band of the cross ridge were once encamped near this lake in the year 1811 and were quite destitute of provisions; they amounted to about forty; their numbers gradually diminished through famine, the survivors feeding upon the bodies of their deceased relatives; finally there remained but one woman, who had subsisted upon the corpses of her own husband and children, whom she had killed for this purpose. She was afterwards met by another party of Indians, who, sharing in the common belief that those who have once fed upon this flesh always hunger for it, put an end to her existence. The Oschekkamega band, inhabiting a very barren country are often reduced to cannibalism from necessity, and the frequent recurrence of it has almost deprived them of the abhorrence which men naturally feel for anthropophagy. It was not therefore from horror, but rather from a feeling of self preservation, that the woman's life was taken away."[20]

A weird story of the lake.

[19] This too is the meaning according to Baraga. Windigo—fabulous giant that lives on human flesh; a man that eats human flesh; cannibal. Oshtigwan—his head. Windigokwe—fabulous giantess living on human flesh.

[20] Wm. H. Keating's Narrative of an Expedition to the Source of the St. Peter's River in 1823, vol. II, p. 128. And Wolseley in his Narrative tells a somewhat similar story. "We were once pointed out an old woman who some years ago had supported life, when in a starving condition, by eating human flesh—by no means an extraordinary or unusual occurrence amongst those people when in such straits. She was certainly a most loathsome creature to look at; her face was so deeply wrinkled, and the wrinkles so full of dirt, that she seemed as if tattoed." Narrative of the Red River Expedition in series of Travel, Adventure and Sport, No. II, p. 279. A horrible story of a man-eater is also told by Alexander Henry in his book of Travels and Adventures in Canada, pp. 206-10 The incident occurred at Oak bay on the north side of lake Superior, twelve leagues from the Sault, in the winter of 1767. A young Indian came into Henry's camp in a starving condition. "The appearance of this youth was frightful; and from his squalid figure there issued a stench which none of us could support." His crime was suspected, search showed where he had killed and eaten a victim, and he confessed to the killing and eating of four others, with the help of his last victim." "The Indians entertain an opinion," Henry writes, "that the man who

Monday, the 26th, we were up at 5 o'clock and found it a beautiful clear morning, with the lake still, and the barometer rising. At 7.15 the canoes were loaded and we left again for the west. The lake is bounded north and south with high rocks of gray gneiss, and in the centre is a large island of the same material, the great giant's head, which divides the Dawson route to the southeast bay of Rainy lake from the route down the Atik-okan and Seine to the northeast or Seine bay of the same lake. The timber on the island and the north mainland has been burnt over, and the naked gray rocks on shore are exposed at every turn. The lake here is less than a quarter of a mile wide, and the bold shore lines so near at either hand, with occasional clumps of green pine, make the scene a picturesque one. The boundary line between Thunder Bay and Rainy River districts is crossed near the western end of the lake. Paddling up into a small V-shaped inlet we landed beside a heap of Laurentian boulders and packed two trips northward across an ugly portage to a little lake, and thence across another half mile portage to Elbow lake. The general impression is that the outlet of Windigoostigwan lake is by way of the Dawson route and down French river into Pickerel lake; but I noticed that it also has an outlet from the head of the V-shaped inlet northward, gurgling through the mass of boulders to reach a swampy hollow on the left, and on to meet another small stream which flows west about midway across the portage, doubtless to descend with the waters of Elbow and several other small lakes in that vicinity to rejoin those of lake Windigoostigwan in French river. Two ridges each forty or fifty feet high have to be surmounted on this portage, and for the rest of the way the trail is either through a half grown thicket of bushes or across bog and water. The descent at the farther end is precipitous, and leads to a small lake lying in an east and west depression about a hundred yards wide. The portage thence to Elbow lake had probably been visited some time by a wind storm, as the fire of 1894 had licked up every stick of timber left upon it, leaving the thin gravelly soil brown and naked, but plentifully strewn with massive gray boulders of gneiss and outcroppings of the same rock in place which gave to the scene the appearance of an ancient and desolate graveyard. It was 9.40 when we reached the head of this portage, and at 10.35 we set off to cross Elbow lake.

Resuming the journey westward.

Out of Thunder Bay and into Rainy River district.

The double portage to Elbow lake.

Elbow lake derives its name doubtless from its shape. It is a fine sheet of clear water, with shores and islands of grey gneiss brought into conspicuous relief by the sweep of the fire; hardly a green tree is to be seen in any

Elbow lake.

has once made human flesh his food will never afterward be satisfied with any other. It is probable that we saw things in some measure through the medium of our prejudices; but I confess that this distressing object appeared to verify the doctrine. He ate with relish nothing that was given him; but, indifferent to the food prepared, fixed his eyes continually on the children which were in the Indian lodge, and frequently exclaimed, 'How fat they are!' It was perhaps not unnatural, that after long acquaintance with no human form but such as was gaunt and pale from want of food, a man's eyes should be almost riveted upon any thing where misery had not made such inroads, and still more upon the bloom and plumpness of childhood; and the exclamation might be most innocent, and might proceed from an involuntary and unconquerable sentiment of admiration. Be this as it may, his behavior was considered, and not less naturally, as marked with the most alarming symptoms; and the Indians, apprehensive that he would prey upon their children, resolved on putting him to death. They did this the next day, with a single stroke of an axe, aimed at his head from behind, and of the approach of which he had not the smallest intimation."

direction around it or upon it. In the last mile and a half towards the west end the lake narrows to about 250 yards, with steep wooded banks north and south, but which of course were fire swept. We arrived at the portage on the north side, near the west end, at 11.25.

BACK INTO THE SEINE RIVER SYSTEM OF WATERS

Across the divide.

The portage ascends naked Huronian rocks 60 or 70 feet, crosses a table-land about a quarter of a mile and descends 40 or 50 feet to a lake half a mile wide[21]; whence is a portage of 75 yards across the height of land to Crooked Pine lake, once more in the Seine river system.

We paddled off from this height of land portage upon Crooked Pine lake at 12.25 p.m. Rain had been threatening for the past two hours, and thunder storms had been passing west and north of us. It was now getting very near, and we made haste to reach a camping ground on a narrow point which runs far out into the lake, a mile or more from the last portage. We reached it at 12.40 and got under cover of the tents just as the storm broke. Last year's fire swept over this pretty point, which at the portage is not more than a hundred yards wide, and only a few Norway pines are left standing.

Crooked Pine lake.

The rain ceased at 3 o'clock, and we started off at 3.25 with the wind behind us. Crooked Pine lake, a body of clear blue water, has a total length from east to west of about ten miles, and the breadth varies from half a mile to a mile, but narrowing at two places where points of land project from the opposite shores to not more than a hundred yards. From the portage to the western or lower end the distance is about eight miles, and for the first half of the way the timber on both sides has been destroyed by fire. The wind rose as we proceeded, and the waves bore our canoes along at a goodly rate. The north shore runs due east and west, with the rocky bank rising steeply 25 or 30 feet in the last two or three miles and covered with small spruce, poplar, etc., to the water's edge. Beyond the last point coming in from the south the waters are shallow and grown with tall rushes, excepting a narrow open channel along the northern shore. Several mining locations have been surveyed here, extending up to Partridge lake. The lake near its western end contracts to a hundred yards or less, beyond which are bays opening out to north and south with low bushy shores.

Atik-okan river.

The outlet of Crooked Pine lake is the Atik-okan river[22], and we entered its channel at 5 o'clock under the shadow of wide-branching trees. It is shallow and narrow, not more than thirty yards wide where it flows out of the lake, and scarcely deserving the name of river. A few minutes' paddling gave us the first of many experiences on this stream—an obstruction of boulders, over and through which the current is swift and canoeing so difficult and risky that it is often better to portage than to run it. Below this first rapid is a basin or pond of still water, which is another characteristic of most streams in the northern regions of the Province, and in less than half a mile

[21] Niven's south base line in lat. 48° 45′ 30″, surveyed in 1891, runs through the southern end of this lake and the western end of Elbow lake.

[22] An Indian name meaning Reindeer or Caribou Bone—caribou being Canadian French for reindeer.

the river again widens into Magnetic lake. This lake is enclosed on all sides with green timber and dotted with prettily wooded islets, and is about a mile long. Landing at a steep rocky portage at the end of this lake, a little north of where the river makes its exit through a deep ravine, we camped for the night. Rain began to fall just as we reached the shore, and it rained heavily until 10 o'clock. Magnetic lake.

Tuesday morning we were astir at six, and I had time before breakfast to go down into the darkly wooded ravine and see the noisy rapids and falls. The river was reached at a quiet pool, below which there was a timber jam On the opposite side the bank rose steeply to a height of 70 or 80 feet, covered with small timber. About a hundred yards above was the foot of the first rapid on this stretch. Going up through the jungle along the bank I observed at the head of the rapid a pretty cascade of ten or twelve feet high, divided by an islet; and although the water made a great noise in rushing through the rocks below, it was above as smooth as glass almost to the brink—flowing gently over a bed of rock as level as a table. It will not be long, relatively at least, until the deep channel is cut back to Magnetic lake, which is less than a hundred yards above the cascade. From a round cove on the right a gorge opens through the slates parallel with the main channel, down which the water no doubt flows when the lake is high. The gorge and falls.

We left camp at 9 o'clock, packing over a half mile portage which is easy excepting at the lower end, where the descent is rough and steep. Here there is a charming view on the south side, where a band of rock 25 or 30 feet high and perhaps 200 feet wide crosses the course of the river obliquely. Out of a dark pool above this natural dam the water has cut its way by four separate channels, and flowing down by dashes and leaps it is broken into foam in the final jump of 15 feet into the deep water below. On the opposite side a steep bank covered with shingle rises about 30 feet to a background of green forest trees and extends about 150 yards below the falls. below Magnetic lake.

At 9.35 we set off down the stream, paddling, poling and wading by turns, ran three rapids and entered Whiskey Jack lake. On the north side of this lake the banks are high and rocky, behind which rise a succession of parallel ridges that have been surveyed and taken up as iron ore locations. At the foot of the lake is a short rapid of 15 yards, which the canoes ran when lightened, and a quiet stretch of ten minutes' paddling was followed by another rapid of the same character. Below this last, to the right, is a bluff of magnetic iron ore extending east and west 200 or 300 yards and conspicuous for some distance along the river. It is known as Iron Mountain, and the range runs through locations 12E, 11E and 10E. The largest exposure is seen from the bend of the river nearly opposite the line between 11E and 10E. The valley is here a mile or more in width, grown with bushes, flags, reeds, rushes and coarse grass, and there is a channel three or four feet deep most of the way to Sabawe lake, which we entered by a gap in the rock at 11.25. Whiskey Jack lake. Iron Mountain.

Sabawe lake has high banks on both sides. We skirted the north shore where the rocky banks are steep, and at 11.50 reached a sand bar which Sabawe lake.

extends from the south shore nearly across the lake. It is only ten yards wide, rises one or two feet above the level of the lake, and is covered with small cedar and tamarac. Here we halted for dinner and resumed the journey at 1.25 p.m. The lower end of the lake is wider than the upper, but shallower, and with a head wind the choppy waves are hard to ride. The river debouches from the southern side, where there is a portage of 200 yards around a rapid, but the Indians were able to run the canoes down without unloading.

Miles of iron ore locations.

Within the next three miles the river winds through a broad valley covered with coarse grasses and bushes, spreads out into several small lakes, and is crossed in that distance four times by Niven's south base line. Half a mile below the last crossing it turns again westward, passing on its way by a number of exposures of iron ore whose brown-stained sides flank the river, first on the north, then on the south, and on the north again, for several miles, rising in the banks to heights varying from 20 to 70 or 80 feet. Locations 400R and 401R, where the river bends to the west below the last crossing of Niven's line, present the highest and boldest exposures of ore, and upon these, as well as upon 212X on the south side, some exploration work was done in 1891 with a diamond drill[23], which is yet housed upon the ground. At 404R, 139X and 238X, where the river runs southwest for half a mile, the bluffs are 40 to 60 feet high, nearly perpendicular, and the brown stains are indicative of large ore bodies. But we had spent some time on the other locations, these could not be easily reached, and as it was after 6 o'clock we hastened on to find suitable camping ground for the night. We reached it at the second of two rapids, where the river again turns to the west; but as the woods had been destroyed by the last year's fire, it was a dreary spot.

A channel with many obstructions.

Wednesday, August 28th, we had breakfast at 6.20 and were off down stream at 7.40. It was a clear morning, with a bracing atmosphere, and good progress was made where the channel was favorable. At 8 o'clock we came to the first rapid, below which a noisy little creek comes leaping down the bank from the south. A high ridge extends along the north bank, and a little beyond it a lower one where Niven's line once more crosses the river from the south to the north bank, both of which show iron stains. Two rapids and a timber jam were encountered in succession, after which came a long stretch of uninteresting river with grassy bottom and a fringe of reeds and bushes on either side. A series of parallel ridges appear on the north side of the river, rising to heights ranging from 25 to 40 feet, and lower ridges on the south bank, all having an east and west course. Finally, at 9.20, we arrived at one of these ridges which extends across the valley, and which apparently had one time dammed the waters of the river to form a lake. Indeed there is evidence at two or three points higher up, notably at the foot of Magnetic lake and at the head of Sabawe lake, that similar barriers of rock have been broken through. The first falls on the river occur below Magnetic lake, one at the head and another at the foot of the short ravine or gorge below

Barriers of rock.

[23]For accounts of iron ore deposits on the Atik-okan river, see the statements of Messrs. Conmee, McKellar, Wiley, Russell and Smith in the Second Report of the Bureau of Mines, pp. 70-76.

the lake. The barrier we have now reached is about 40 feet high and the river has cut a channel across it to the depth of about 25 feet, with a width at the bottom of not more than ten or twelve feet. Through this the water rushes with great force, and a chute on the farther side descends fifteen or twenty feet in fifty yards, beyond which a rapid extends a hundred yards or more before quiet water is reached again. The portage here is over naked rock, steep and very rough in the descent upon the western side. A high, bold bluff of schist rises on the north side of the river below the portage, which continues for perhaps two hundred yards and another rapid and timber jam are reached. Here the portage comes in from the head of Steep Rock lake, across which Dr. Coleman and his party had come, and from this point to its mouth the Atik-okan was unknown to the Indians. Six rapids occur in quick succession, and between boulders and timber in the channel progress with the canoes was tedious and difficult.

The portage from Steep Rock lake.

Many trees had fallen since the previous year's fire, the earth which held their roots having been burnt away, and seemingly none of the explorers on the route have been interested enough to remove the obstructions. Like ourselves, each one had no doubt been concerned only in how to get through once, leaving to those who came after them the task of making a way for themselves. The clearing of canoe routes to and from the mining regions, such as this one (it may as well be suggested here) is work that might properly enough be undertaken by the Government; and indeed it is advisable that all portages should be improved as well as the streams. It would be a great boon to explorers if all the small timber on portages was cut away to a width of six or eight feet, so that canoes and packs might be carried over them with greater ease than is possible on most of them in their present state. In wet weather especially a portage through timber is a most disagreeable undertaking. Fallen trees too should be cut away, and some rude bridging constructed where necessary. Improvements of this character could be made at little cost, and when made they would be gladly welcomed by the hardy but often toil-worn explorers.

Improvement of the portages and river channels.

We left the portage from Steep Rock lake at 10.25, and the next hour was spent mostly in the water, lifting the canoes over obstructions of rock and timber, or guiding them over rapids, with here and there a basin fringed with rushes, grasses and lily pads. A portage of 50 yards leads around a fall of eight feet, where the river cuts through one of the ridges of green schist, so peculiar to this region. Its course here turns due north, and 200 yards farther on is another and more serious obstruction of the same kind as the last, or rather two of them in short succession, for there are two falls with a total descent of 50 feet. The last of these, which is also the last fall on the river, is quite picturesque. The stream is divided into two channels by a rocky island. The channel on the right is eight or ten feet wide and twelve or fifteen feet deep, and the water descends 40 feet by a series of leaps and falls to the pool below. The channel on the left is smaller, and before the final leap of fifteen feet is reached the water divides into three streams, pro-

A stretch of falls and rapids.

Last fall on the river.

ducing a very pretty effect. The portage is on the right side of the river, and is steep and hard at the lower end.

After dinner at these falls I walked down the right bank about a mile, hoping to find the posts of mining locations, and so locate our place on the map, but none were to be found; the fire had no doubt destroyed them all, although some of the lines were visible upon the charred trees. The land on both sides is black loam, and for some distance out from the river maintains a dense growth of fire-weed. Moose tracks were frequent, one of which was of enormous size. Several high ranges of rock extending eastward were observed on the right bank, and a band of rock crossing the river half a mile below the falls creates the only rapid worth noting for the rest of its length. At three places only were bands of rock seen below this point, and these are very narrow.

From the time I entered the canoe again at 2 o'clock until we reached the mouth of the river at 4.45, its course was steadily one continuous "wind about, and in and out"; but never a "foamy flake" or "silvery waterbreak" like the poet's brook. All the way it flows through an alluvial valley, and for our first two hours of paddling with banks of sand, clay and loam six to twelve feet high, a channel contracted to thirty feet wide and four or five feet deep, bending at angles of 90° at intervals on the average of a hundred yards. Jams and snags are frequent, of course, but these offered no serious impediment. The low black soil on which lily pads flourish was literally ploughed with moose tracks, and all the herbage was cropped close to the roots; indeed this appears to be a typical moose country. The vegetation on the banks was very luxuriant, consisting chiefly however of low bushes, and with but few tracts of heavy timber. The mountain ash is frequent, and its red clusters of berries contrast very beautifully with the dark green of its foliage. The high-bush cranberry is plentiful also, but lower down the stream.

Through an alluvial valley.

In a moose country.

Within about three miles of its mouth the river turns northward and is crossed three or four times by Niven's base line before it turns south again to resume a slow and tortuous course westerly to Steep Rock lake. Its waters hitherto have been clear, but now they become brown and obviously have reached the lake level; the banks are hardly perceptible, and the flats are flooded. Wild grass and rushes, with some rice, grow along the margins, affording cover and food for ducks, and the rushes extend far out into the lake.

Steep Rock lake owes the name to its high rocky shores, which rise almost perpendicularly out of the water. It receives from the east the brown waters of Lac des Mille Lacs through the Seine river, and discharges them to the west into the same river. The lower expansion of this lake is called lake Apunesigacen on the Geological Survey map, although there does not appear to be any good reason for a distinct lake name, there being no difference of level and the passage between the nearest opposite points of land is not much less than a quarter of a mile wide. A headland of rock on the north side of this expansion extends eastward about half a mile, rising 50 to 80 feet in

Steep Rock lake.

places along the shore, and behind it the Seine makes its exit swiftly through a narrow channel. A portage of a hundred yards across the neck of land between the lake and the river avoids this rapid, and we camped upon it for the night.

Across the portage

From our camp we could hear early in the evening the noise of the stamps at the Lake Harold gold mill, about three miles away in a northwesterly direction, and on Thursday morning the sound of the 6 o'clock whistle. This was the first sign of civilized life manifested to our senses since passing the lumber camp on Lac des Mille Lacs Saturday morning, and it was gladly welcomed. We had breakfast at 6 40, and at 8.10 our canoes were loaded on the Seine side of the portage.

into the Seine.

We paddled up the river about 250 yards to get a view of the rapids. A short distance above them the river comes down from the east, then turns south and shoots through a channel narrowed to perhaps 50 yards wide into a bay or cove formed by the action of the water that looks dark and sombre in the morning shadow of the woods. Again the river turns to the west, flowing strongly down between banks of rock ten to fifteen feet high covered with a good growth of timber, chiefly Norway pines. Two hundred yards below the portage another rapid occurs, not so violent as the first, but full of eddies and cross-currents. We ran it easily and entered a stretch of river widened to 300 yards or more and dotted with a few small and pretty islands. Bending a little to the north two other small islands are approached, on the first of which we landed. It is about 150 yards long by 70 wide, oval-shaped, rising perhaps fifteen feet above the water line, and bears a few Norway pines of moderate size. Evidently this island is an old and favorite camping ground, and as I was to visit the Lake Harold gold mine our tents were pitched here for the day. A narrow gap in the northern bank opens into a bay or small lake, and through this is the entrance towards the mine.

LAKE HAROLD GOLD MINE.

By trail to the gold mine.

I was told that there is a canoe route from this bay up a creek into Rice lake, and thence a portage to Harold lake; but the map is misleading at this point, showing the creek to empty on the north side of the bay instead of, as I afterwards learned, directly behind the promontory to the right. We coasted the bay in vain for the stream, and coming to a trail on the north side which lead off in a northwesterly direction we decided after the loss of an hour's time to walk across to the mine. The trail was blazed out fairly good for a short distance, and the path was easy to follow, especially across a stretch of low swampy ground thickly carpeted with moss. But when a high ridge of rock was reached, over which a recent fire had swept, both trail and blaze were lost, and we took a straight line for the mill, the noise of whose stamps, which had been distinctly heard all the morning, served now as an unfailing guide. Across the ridge a descent was made into a low and broad muskeg, bearing a thick growth of small timber, and covered knee-deep with moss. Another high ridge succeeded, also fire-swept, and having struck the east line of mining location 275X we followed it north to the

shore of lake Harold. Across the water were the white tents of the mining camp, while to the left, hidden behind a high point of rock, was heard the steady pounding of the stamp mill.

We arrived at the mill at 10.45, nearly two miles from our camp on the Seine, and after a short interview with Mr. Frank Gibbs, the superintendent in charge, the work of inspection was commenced. At one o'clock an appetizing dinner was served in the dining hall of the camp. Fried partridge served with onion sauce may not be good form in a fashionable menu, but a chef from Paris could not have done better for a hungry man. "Beef, and plenty of it," a man who sat beside me at a city hotel table many years ago said to the waiter who asked for his order. Partridge and plenty of it was our good fortune at Lake Harold gold mine camp; for partridges are so many and so tame in some parts of those northern woods that one may pick them off the branches of trees with a loop at the end of a stick, and no one asks or cares when the season closes or opens.

Inspection.

Location 219X.

Lake Harold gold mine is on location 219X, west side of lake Harold, and a mile and a half north of the Seine river. The lake is about half a mile across, enclosed on the north, east and south with a forest of Norway pine, gravel banks on the north and east, Huronian schists on the south and granite outcroppings on the west. The water of the lake is clear and of a greenish hue; the outlet on the eastern side has been cut to lower the level of the lake about seven feet, for the purpose of affording access to masses of ore which had fallen into the water from a vein upon the western bank; and I was told that at very little expense the level may be reduced an additional fifteen feet by cutting a trench of sufficient depth and fifty feet long at the outlet.

The discovery of gold.

The discovery of the Lake Harold mine was a mere result of chance. An Indian in the service of the Wiley Brothers of Port Arthur was employed six years ago prospecting for iron ores, and having reached lake Harold he brought away with him some samples of rock which were thrown aside as worthless. Two or three years afterwards however they were examined and found to contain gold. This induced the Wileys to undertake a little prospecting work in the region, and in the fall of 1894 considerable work was done, with such satisfactory results that they decided to develop the property. Accordingly, in the winter of 1895, a contract was entered into with Mr. C. S. Morris of Toronto, who undertook to erect a mill and equip it with ore-treating machinery on condition of acquiring a certain interest in the location, to be secured to him when the mill was completed and in running order. A battery of five stamps was ordered from the works of Fraser & Chalmers of Chicago, to be constructed of steel throughout, with a mortar in three sections to facilitate transportation, and battery, boiler and engine were taken in from Bonheur station during the month of March over a winter road cut out from the station to lake Harold, a distance of 56 miles. A portable sawmill was taken in also as part of the outfit, to cut lumber for the mill, offices and other camp buildings. The contract was completed at the end of July and on 1st August the machinery was started.[24] From that

Building and equipping a mill.

[24] At the completion of his contract Mr. Morris sold his interest in the mine to Mr. Frank Gibbs of Port Arthur, and ceased his connection with it.

date until the time of my visit (August 29) it had been running 25 days of twelve hours, but the interruptions due to various causes made the actual working of the stamps only 117 hours. In that time 75 tons of ore were crushed, and the clean-up of the plates yielded a brick of gold weighing 46 ounces, or about $11.50 of free gold per ton. The pulp was not concentrated, but it has been stored awaiting the delivery of vanners. Analyses show, it is claimed, that the sulphides carry a good percentage of gold.

The mine and works.

The first lot of ore milled was taken from what is called the Lake Shore vein, in the face of a bluff north of the mill. Through the action of the weather a section of this vein has scaled off and fallen into the water, and to recover it the lake was lowered by a cutting at the outlet, as stated above.

Entry in the Inspector Book.

The following entry in the Inspector's Book under date of August 29, 1895, supplies more detailed particulars of the mine and works :

"On behalf of the Inspector of Mines I have this day visited the Lake Harold gold mine and inspected the workings and mill.

"Cross-cuttings and other prospecting work have been done upon a number of veins on location 219X, but ore has been taken only from the Lake Shore and McComber veins near the mill, and from No. 1 and No. 2 shafts in the northwestern corner of the location.

"Open trench work and cross-cuttings have been made upon the Lake Shore vein, exposing it for a length of about seventy-five yards, and a shaft has been sunk upon it to a depth, Mr. Gibbs informs me, of twenty feet. It is now nearly filled with water, and covered with slabs for safety.

"McComber vein has been opened at the foot of the northern slope, where it is exposed, and stoped south fifty feet. Its depth at the north end is about ten feet, and seventeen feet at the end of to-day's working south, where it is intended to sink a shaft. The course of the vein is north and south, mag., and it dips 55° east. The hanging wall requires the support of stull timbers and a cover of lagging to prevent accident by the fall of loose rock from the surface.

"No. 1 drift is in the northwest corner of the location, and a tunnel has been driven eastward upon it upon an east and west vein a length of fifty-nine feet. This tunnel is six feet six inches high and four feet wide, and at its end the vein is two feet six inches wide.

"No. 2 drift is upon the eastern face of a ridge west of No. 1, and distant from it nearly three hundred yards. The vein has an east and west course, and has been stripped along the top of the ridge westward about seventy-five yards. The length of the tunnel is sixty-two feet on the vein, its height six feet eight inches and its width four feet. The width of the vein at the end of the work now in progress is three feet six inches. The dip is 60° north, and when stoping is undertaken the hanging wall should be securely timbered and covered with lagging if required.

"The mill is a frame structure, and is supplied with a Gates crusher No. 0, and a Fraser & Chalmers battery of five stamps with amalgam plate, driven by an engine and boiler from the works of H. W. Petrie of Toronto, stated to be about 30 horse power capacity. All parts of the plant are in

good condition, and when a railing is placed between the drive and balance wheels and the boiler room it will be reasonably safe against accident. It is necessary also that a railing should be placed on the stairs leading from the ground floor of the mill to the crushing room.

"The tramway from the Lake Shore and McComber veins is substantially constructed, and safe for foot travel over it if reasonable precaution be taken; but this is not its purpose, and no railing seems to be required for it.

"The other buildings on the location consist of (1) an assay office and store-room, (2) office and dwelling house, (3) dining camp, (4) men's sleeping camp, (5) stable, and (6) blacksmith's shop. There is also a sawmill of the Jenckes Machinery Co's make.

"There are at present nineteen men on the pay-roll, consisting of seven miners, seven surface laborers, one mill man, one engineer, one cook and two carpenters. Frank N. Gibbs is in charge as superintendent.

"Two copies of the Mining Regulations, made by Order-in-Council June 23rd, 1894, under section 6 of The Mines Act 1892, have been posted upon the premises, one on the principal door of the mill and one on the door of the boarding camp."

Back to camp on the Seine river.

It was five o'clock when the work of inspection was finished, and we were ready to start back to our camp on the Seine. No one at the mining camp knew the way out through the timber, and as the trail was very obscure in places we were advised not to attempt it, but rather to take the canoe route by way of Rice lake and its outlet. Mr. Gibbs kindly placed a birch bark canoe and two men at our disposal, but the canoe was a light, frail and leaky craft, and after crossing lake Harold to the portage on its eastern side it was considered prudent to go on the rest of the way without the men, the canoe being decidedly overloaded with them. Mr. Gibbs was not surprised that we had missed the canoe route up the creek, as this was almost everybody's experience, its mouth being hidden by a field of rushes. But the down trip was plain sailing, he assured us. We did not exactly find it so, owing to the low water in Rice lake and the obscure channel in a portion of it. The lake is about two miles long and half a mile to a mile wide; but in the summer season the wild rice covers perhaps two-thirds of its area, and to that extent its bed is then a shaking morass. We were directed to keep close to the right and make for a clump of pines at the lower end of the lake, where there is a bay, and continue down this bay to the creek which is the outlet of the water. This would be all right in high water, but it is misleading when the water is low, and we were obliged to explore the way for ourselves. In due time we reached the clump of pines, and paddled south into the bay, but the lower end was grown with water grasses and rushes and the creek was not discovered until we had entered it. It is a narrow, shallow and winding stream, full of weeds and snags, and obstructed in places by fallen trees; while its mouth and for some distance out into the bay supports a rank growth of rushes, emerging from which is a steep promontory on the left and the gap into the Seine. The day was very fine and the evening warm, and our clothes were fairly dried by the camp fire before the hour of bed-time.

DOWN THE SEINE RIVER.

Friday morning I was awaked at an early hour by a strong wind which blew up the river, and looking out at the tent door I observed that the sky from which the young moon shone down so brightly the night before was hidden by heavy clouds. A storm was brewing, and just as day broke the first drops began to fall, and then came a down-pour of rain with thunder and lightning which lasted for an hour or more. At seven o'clock it slackened, but in a few minutes a leaden-colored cloud which rose out of the west brought rain again in torrents until 9 o'clock. From that hour until 11.30 showers fell at intervals, and the storm gradually ceased. We had an early dinner and at 12.45 p.m. started down the river in the face of a strong wind.

Thunder storm on the river.

For two miles below our camp the Seine has a width of about 300 yards and holds a number of pretty islands covered with small pine. Norway pine and poplar also grow along the banks, which here and there rise into steep bluffs of rock 60 to 80 feet high. At 1.20 we reached the first rapid, where a point of rock projects from the south side and narrows the channel to a width of 50 yards. The waters descend swiftly, forming strong eddies and back water. Three rapids were run in succession, the first of them in a blinding rain. At the foot of the last, Eye or Deer river comes in from the north, and the Seine widens again to 200 yards or more. At 1.35 we entered Perch lake, which is a long and irregular sheet of water, or, strictly speaking, it consists of four sheets of water of different levels with three connecting narrows formed by contractions of the rock-bound shores, although the same name is common to all. The south side of the first of these expansions shows a good growth of pine, poplar, spruce, etc., while on the north side a fine grove of Norways sweeps around for a mile or more in the arc of a circle, with a fringe of poplars at its centre. At 1.53 we passed through the first gap, where a bar stretches northward from the south shore. At 2.13 we reached the second narrows, where a point of rock extends out from the north shore and an island occupies the channel; the current here is swift. Halting for ten minutes at these narrows we proceeded along the north shore to avoid the choppy waves of the traverse, and at 2.38 entered the third narrows. The fourth section of the lake is little more than half a mile long and perhaps one-quarter of a mile wide, with a long point of land (or possibly an island) cutting into it from the southwest.

A succession of rapids.

Perch lake.

We passed out of Perch lake at 2.53 and entered upon an exceedingly beautiful stretch of river, which is here divided into three or more channels by a number of large islands. Our course was down a swift current less than a hundred yards wide—on either side of us a dense forest of Norways with finely tapering boles of ten to fifteen inches diameter rising branchless to 80 or 100 feet, standing as close as they could grow upon a rich carpet of green moss, and through them the afternoon sun shinning like a purple haze—the scene was as delightful and perfect as any that I had ever beheld in water and woodland. At the end of a mile three of the channels reunite, and the river again expands into a lake of oval shape a mile and a half long and a mile wide, with a pretty islet in the centre. At its lower end, reached at

Fine and varied river scenery.

3.30, the rocky banks contract to a width of 40 yards or less, where there is a swift rapid of 200 yards, and by a singular coincidence this as well as several others that afternoon were run in the face of beating rain. A series of three lake expansions of a quarter mile to a mile wide follows. We skirted the north shore of the third and longest because of the high head wind which came in frequent gusts, for these small bodies of water are quickly stirred up to the unsafe point for a canoe. Green timber prevails on both shores, with considerable Norway pine of moderate size; along the north side of the third lake, near its lower end, fire has done some damage to spruce and poplar, but seemingly none to the pine.

The exit from the last of these three nameless lakes was made at 4.30. The river's banks are contracted to a width of 100 to 150 yards, and it is studded with islets covered with small spruce and cedar, forming a charming piece of scenery. At 4.38 we arrived at the first portage, where the river falls 7 or 8 feet. It is much better beaten than the portages on Atik-okan river, doubtless owing to the fact that the lines of travel by the Seine and Atik-okan have converged. The banks are densely wooded with pine, tamarac, spruce and balsam, but none of the trees are large. The portage is not more than 100 yards long, and we were off again at 4.55. At 5.20 we came to another rapid or small fall, where the river drops about three feet. The canoes were let down through a channel five feet wide, upon the north side, without any trouble of portaging or more than a few minutes delay. Below is a continuous rapid through a maze of islets, and at 5.30 we came to the head of a long portage and camped upon it for the night. This portage is a little more than half a mile long, passing by three falls on the Seine before Calm or Nonwatin lake is reached. At the first of these falls the river takes three successive leaps over ledges of rock, presenting the appearance of a terrace of waters. At the second falls the river is divided by islets into four or five channels, through which the waters rush with great force, forming a tumult of eddies and cross currents where they meet below; again to divide into two streams before making the final plunge of ten feet into Calm lake. The rapids and falls in this part of the river, with the scores of wooded islets which occupy its bed, compose a varied and delightful bit of scenery. From the foot of Perch lake to the level of Calm lake the descent of the river according to Dawson's profile route is 29½ feet, and from the level of Steep Rock lake it is 39 feet.

Falls, rapids, and a maze of islets.

Our plans were laid to reach Shoal lake Saturday evening, if possible; but the distance is about forty miles and there are thirteen portages around falls and rapids on the river. We rose at 5 o'clock, breakfasted at 6, and left the portage and falls at the head of Calm lake at 7.15, pursuing a north-westerly course. It was a fine sight in the early morning, for although it was only the last day of August the foliage of the poplars which crowned the long slopes towards the east and north was beginning to take on a golden hue, to which an added lustre was given by the bright sunlight. The sky was clear save for a fringe of gray cloud on the western horizon, and the waters of the lake were in keeping with its name. But before we had paddled a

Calm lake.

third of its length the sky was overcast and we were struggling with a head-wind. The shore of the lake on the southwest side is rocky, with a fringe of cedars along the water's edge, and behind them spruce, poplar and Norway pines; on the northeast there are stretches of sand banks, and the timber is mostly poplar and Norway pine. Niven's south base line crosses the lake at its widest part, about midway between the extreme ends. Beaver river comes down from the north, and is the only stream of importance that was observed to flow into the lake. On both sides, near the lower end, surveyors' line, were to be seen, where a number of mining locations had recently been laid out.

Rapids, falls and portages below Calm lake.

We passed out of Calm lake at 8.18, and the Seine again becomes a rapid-flowing river, with a number of low islets covered with bushes. At 8.25 we ran rapids, and at 8.35 reached falls where the river divides into three streams. Other falls occur 200 yards lower down, and the two portages were crossed in less than half an hour. At 9.05 the head of the next portage was reached, which is half a mile long and very rough. Two falls and tumultuous rapids are overcome by it, and the descent in that distance is 50 feet or more. The rapids below the second falls were run by the Indians in empty canoes, each one standing upright, and uttering wild yells of delight as his canoe leapt from crest to crest of the waves.

From the foot of the portage, which was left at 9.50, the river runs northward into a cul-de-sac to turn again due west. A bay on the north side 250 yards in length and 100 yards wide at its mouth is suggestive of an old river bed, but we had no time to explore it. A rapid was run just below it, and at 10 o'clock we reached falls and rapids at the base of a high rocky bluff, where a short portage had to be made. The width of the river here is not more than 40 yards, and the channel looks like a canyon cut out by water or ice. An unfinished channel parallel with it on the south side is beautifully grooved for a length of 25 or 30 yards, and is covered with glacial scratches.

"Pretty danger rapid here," Nicol said, as at 10.10 we left the foot of the short portage, and it was certainly a swift, narrow and deep current, with the north bank rising perpendicularly to a height of probably 70 or 80 feet. On the left the river expands into a bay, the shore of which is thickly covered with timber. At 10.15 another portage was reached, the river contracting to thirty yards, falling six feet abruptly and rushing off into a very swift and noisy rapid. The portage is about 300 yards long, and we completed it at 10.30. For the next mile the river is like a canal, running due west, with a high steep bank of rock on the right, cut at one point by a deep notch that looks like a closed-up channel. Below it is a small lake, out of which the river flows in a northwesterly course in swirls and eddies, forming a bay upon the east side and turning again towards the west. At the bay a deep depression extends toward the northeast, which has the appearance of an old river bed. The general course of the river from Calm lake to this point is northwest; and then for several miles it runs southwest.

Survey of a new township along the river.

We called at Proudfoot's camp below the bay at 10.50, where a new township was being surveyed ; but although a number of instruments were hung upon the trees, it was evident that the camp had not been occupied for several days. Five minutes paddling brought us to a bend where the river turns due south, and is divided by an island into two channels. We took the narrower one to the left through strong rapids, and at the end of 200 yards, where the streams rejoin, the river again turns southwestward. The north bank for some distance is alluvial, and is heavily covered with small timber. At 11.05 falls are approached which are observed to be divided by an island, the main portion of the river going down the channel to the right. The portage here, like the two preceding ones, is on the left bank, whereas all others that we had crossed on the Seine are upon the right bank. Its length is 300 yards. The strong current descends into a quiet bay or pool, which no doubt is of its own making, out of which the waters escape through a gap less than twenty yards wide, formed by the projection southward of a point of green schist fron the north bank. The flow is exceedingly swift and strong, but by lining the canoes down close to the shore little time was lost in getting into safe water again. We had left the last portage at 11.25 and the decharge at the gap at 11.40. The course of the river continues southwest with a good current, and at twelve o'clock we reached the head of a portage where the river is crossed by Niven's south base line. Numerous locations have been surveyed along the river from Calm lake, many of them connected with the section of the line between the lake and the river westward, but little or nothing is yet known of their mineral value. The portage is across a gravel bank 20 or 25 feet above the river, and is about 300 yards long. The channel of the river is full of large boulders, and the rapids are altogether too violent for canoeing.

Mining locations.

A stretch of river within alluvial banks.

We had dinner at the foot of the rapids, and set off again at 1.30 p.m. Five of the thirteen portages had yet to be made, and about twenty-five miles of river and lake, and it was obvious that we could not hope to reach Mine Centre on Shoal lake before nightfall. For a mile from the crossing of Niven's line the river runs about southwest, with one or two sharp bends to the south, after which its course for three or four miles is nearly due west. Excepting at the turns, where bands of rock cross the stream forming rapids, the banks are alluvial. The valley widens on the right, but on the left the the bank rises 20 feet above the water. The timber is mostly white birch, spruce, balsam, etc., and I think this is altogether the most beautiful

[25] The township of Bennett. It's location is described as follows in Mr. Proudfoot's report to the Department of Crown Lands: "The township of Bennett is situated on the Seine river, Rainy River district, and is bounded on the south by Niven's south base line, on the north by Niven's north base line, on the west by Niven's fifth meridian line, and on the east by unsurveyed lands of the Crown. The Seine river enters the township at the middle of the east boundary and following in a general southwesterly direction, with numerous rapids and falls, leaves the township about the middle of the south boundary. All that portion of the township lying south and east of the Seine river, with the exception of seventy acres, has been taken up as mining lands and surveyed into mining locations. Mining locations have also been laid out along the south and west boundaries and north of the Seine river." All these locations have been taken up for gold-bearing quartz, Mr. Proudfoot states in his report, excepting two on the west boundary upon which there are indications of iron ; from many of the veins gold can be obtained by panning.

reach of the Seine. Just above the next falls a white man and a woman were met in a canoe, the first human beings we had seen since leaving lake Harold. The man said he was prospecting for gold, and had been out several days. The woman protected her face with an old-fashioned and closely drawn sunbonnet, and she may have been of any colour, red or white; the proximity of an Indian reserve suggested the former, and the sunbonnet the latter.

Another series of falls and rapids.

We landed at the portage above the falls at 2.15, on the right bank of the river; packed over the bare rocks of green slate standing on edge 100 yards, to load up and run a rapid of 50 yards to a rock which in high water is an island, and packed again over rocks 75 yards, around another falls to quiet water below the island. Both these falls are divided by little islands, the upper covered with small timber and the lower mostly naked. The left hand channel of the second falls or chute is a narrow chasm through which, owing to its peculiar shape, the water curls like a screw. Off again at 2.35 down a fine bit of river, and at 2.43 we came to another falls, around which is a good portage of 200 yards across a point covered with Norway pines and cedars. The channel is contracted within walls of rock to 30 yards, drops about 10 feet perpendicularly, with a swift current below. At 2.55 we paddled away, borne quickly down the stream, and at 3 o'clock reached a fine clean chute having a descent of about 10 feet in a channel 30 yards wide. The portage is 200 yards long, and we left the foot of it at 3.10. Below the rapids is a charming pool fringed with grass and water lilies, and its banks are densely covered with white birch, spruce and balsam.

Sturgeon falls.

The portage above Sturgeon falls was reached at 3.25, and is about 100 yards across. The falls are not perpendicular, as I had supposed, but form three successive terraces with a total drop of 12 feet. The channel has a width of about 35 yards, and is filled with boulders. The timber on the banks is principally spruce, balsam and white birch. The river below the falls lies in a gorge about 200 yards long, and for at least a quarter of a mile it is a strong current, full of eddies.

Sturgeon falls is the head of navigation on the Seine river. This was our last portage, and we paddled away from it at 3.35. The thirteen portages and one decharge from the camp above Calm lake had occupied an aggregate time in packing across them of 3 hours 37 minutes, or an average of 24 minutes for each one.

The Indian reserve known as 23 B2 lies on the north side of the river and extends from a point a little above the falls about five miles west. On the south side of the river a number of mining locations have been surveyed, on one of which near the falls a new log building was in course of erection.

Wild Potatoe lake.

A mile below Sturgeon falls the river expands into a small lake about three miles in length, with low and well-timbered banks on each side. The exit from this lake was made at 4.45 and at 5.25 we entered Wild Potato lake to land at a point of naked gray schist on the south shore at 5.30, where tea was made ready. Indian reserve 23 A occupies both sides of the river

below 23 B2, and for half way down the lake. On the north side of the lake, and near the upper end of it, is an Indian village of a few houses.

From our landing point on Wild Potatoe lake to Mine Centre on the north side of Shoal lake the distance is nine miles, or possibly ten by the canoe route. We left on this last stretch at 6.23, narrowly escaping an upset with one of the canoes at the start, owing to undue haste. Around the point the lake is full of weeds and reeds for the greater part of its length, and with the level glare of the sun in our faces the situation was not very agreeable

Coasting along the south shore, a large porcupine was observed on a tree which had fallen out over the water, the second wild animal that we had seen in all the wilderness region traversed since leaving Savanne. But it is hardly correct to class the porcupine with wild animals, its motions being those of a supremely indifferent one. We paddled up within four or five yards of this fellow, and although almost near enough to hit him a blow with the paddle he sat up and stared at us very composedly; then, when a motion was made at him, he turned and walked slowly away along the tree, with the quills of his back and tail upon end, pausing every two or three steps to stare at us over his shoulder through his black beads of eyes. A crying shame it would be to to attack a beast that reposed such colorable trust in man, although it is more likely that his real trust was in the defence of his quills.

The Porcupine.

The lake expands below the pine-covered point on the south side, which we passed at 7.15, and the last rays of the setting sun were pinking the tree tops on the eastern hills. It was a lovely evening, with brilliant cloud effects shading from crimson to blue in the west, and as the light of the sun faded slowly away the mellower light of the moon shone down upon the water, casting dark shadows along the wooded shores.

Shoal lake and Mine Centre.

Our exit from the lake was made at 7.35, and in the two miles to Shoal lake the river has a breadth of 300 to 400 yards, looking in the golden evening light between its low banks covered with poplar like a magnificent avenue. Paddling by a number of wooded islands, Seager's camp, which is a village in embryo, was passed at 8 o'clock; five minutes later we entered Shoal lake, which was one mass of weeds, and at 8 30 we landed the canoes on the rocks at Mine Centre and were made very welcome at the only "hotel" in the place —especially by Jack Bedford the cook, who is a character in his way, with much experience of the world.

AT AND AROUND MINE CENTRE.

Ending the long canoe trip.

As I intended to remain several days in this district to visit mining properties, and especially those upon which work had been or was being done, the Indians, Alec and Nicol, were paid off and they proceeded to their homes on the reserve near Fort Frances. Mr. Cameron also left for the Fort by canoe, to take the boat there for Rat Portage and return by rail to Fort William. He was delighted with the trip by canoe from Savanne, and gained an idea of the vastness of Ontario which is hardly obtainable on such a scale in any other way. Especially is the Seine river calculated to arouse one's enthusiasm by its volume, varied scenery and natural beauties. There is no river in lower Ontario to surpass it excepting such boundary rivers as the St. Lawrence and the Ottawa; and if the portages were improved I cannot conceive of a finer canoe route than is afforded by the rivers and lakes from Savanne to Fort Frances, or to Rat Portage if one so desires.

Mine Centre, Shoal lake, and the sights and sounds thereof.

Mine Centre is on a point of land on the east side of an unnamed bay at the widest part of Shoal lake. The village consists of a general store, an assayer's office, a bar-room, a small boarding house and two or three other buildings; and a larger and more substantial boarding house was in the course of erection. The Keewatin schists stand on edge, and the only soil in sight may be measured in handfuls, lying in crevices between the ribs of rock. Across the bay may be seen at night the lights at the Wiegand mining camp; and three miles to the southwest the lights of the more pretentious Seine River City. All around the lake is a dense wood of poplar, and on the high ridge towards the north, a mile or more from the lake, is what remains of a pine forest, now for the most part cut over by the lumbermen. The wooded slope of the lake, curving around its many bays, is remarkably adapted to the reflection of sounds, several demonstrations of which were given in the quiet evenings by Jack Bedford. Standing on the rocks at Mine Centre, he would utter a loud and ringing halloo across the bay to Wiegand's, the echo of which would return in eight or ten seconds; a few seconds later it would be heard from the northeast side of the bay, then from the south side of the lake, again from the northwest side, and so resound and reverberate six or eight, and on a very still night, ten or twelve times, to die away at last in the direction of Seine River City.

A Government road towards Vermilion lake.

A Government road was in course of construction during the summer from Mine Centre northward to the mining locations between Shoal and Vermilion lakes, which was completed during the time of my stay in the locality. It has been cut out and grubbed as far as the old lumber road, and graded up over the low ground; and a very passable road is the result, made at a cost of $600. The intention is to extend it as far north as Vermilion lake, and probably on to Turtle lake. A number of mining locations lie along it, on several of which some work has been done.

HILLIER OR LUCKY COON MINE.

Hillier or Lucky Coon mine.

The first location reached by the new road is known as the Hillier or Lucky Coon mine, 655P, consisting of 167 acres. It is at the terminus of the road, and about midway between Shoal and Vermilion lakes. It is

embraced in what is known as timber berth No. 33, upon which the pine timber was cut four or five years ago. The first discovery of gold was made on 28th July, 1894, by William Campbell, who had associated with him as prospectors A. M. Robertson and John Mosher. The vein is known as No. 1, and crosses the property in a course of northwest and southeast. Another vein, known as No. 2, was discovered a week later by Mosher a short distance north of the first. Its course is west-northwest and east-southeast. Both veins are exposed in a ridge of granite which runs north and south on the property, but towards the east and west sides they are covered over with several feet of sand. The No. 2 vein appears to outcrop on location AD4, west of 655P, where some work has been done by Campbell, Fawcett & Co. No. 1 vein is supposed to extend into location AD2, and apparently it cuts No. 2. In November, 1894, Robertson discovered a third gold-bearing vein on the property, which is known as No. 3. It lies on the eastern side of the location, and its course is nearly east and west. Besides these there are ten or twelve stringers or branch veins, all of which join with one or other of the three principal veins described above.

Working the location.

In August, 1894, a syndicate composed of Hugh Steele and George Hillier of Duluth and Walter Miller of Minneapolis entered into an agreement with the owners of the location, whereby they undertook to pay $1,800 cash, build a five-stamp mill, and work the mine and mill on a basis of half the net profits. Any further additions to plant and cost of working the mill and mine were to be provided for out of the profits. Under this arrangement mining operations were started on No. 1 vein on the 20th of September, and a shaft 6 by 8 feet was sunk to a depth of 20 feet. Soon after a shaft 8 feet square was commenced on No. 2 vein and was put down to a depth of 50 feet. This work was completed about 15th December, when mining was suspended until the mill should be built and got into running order.

No. 2 vein is about 3 feet wide at the surface, but increases to 10 feet 4 inches at the bottom of the shaft. A wedge-shaped horse of country rock occupies the middle of the shaft from some distance below the surface to the bottom, having a thickness of two feet above and decreasing to ten inches below. After the mill commenced running a level was drifted from the shaft at a depth of 25 feet and extended 15 feet towards the west. The dip of the vein is about 80° southwest. The ore from this as well as from No. 1 shaft is fine looking, and many specimens show free gold.

Mill for treating the ore.

The main part of the mill is a frame structure, of size to accommodate two five-stamp batteries, while a log lean-to provides shelter for the boiler. The machinery consists of a 35 h. p. engine and boiler, supplied by a firm in Erie, Pa., a Gates five-stamp battery, and a Blake crusher. There are no vanners or other concentrating apparatus, the pulp after passing over the plate being carried off to the dump. A tramway of 300 feet was constructed from the No. 2 shaft, on which the ore was elevated to the third floor of the mill, to be crushed and fed to the battery. The mill was started on 14th April, 1895, in charge of William Peters (subsequently in charge of the Lake Harold mill) and work was carried on without interruption for 25

days. The machinery ran well, and I was told that two bricks of gold were produced, the value of which was not known to the original owners. The mill was run night and day, and the quantity of ore stamped is given as 250 tons. At the end of that time some disagreement took place between the members of the syndicate and Messrs. Campbell, Robertson and Mosher over the supplying of machinery to concentrate the pulp and treat the sulphides, and failing to agree the works were closed down. Other causes and motives are mentioned as influencing the action of the syndicate; but there are two sides to the dispute, very probably.

Miners, laborers and millmen to the number of fifteen were employed while work was in progress, the rate of wages being $1 to $1.25 per day and board. A comfortable boarding house of squared timber, blacksmith's shop and stables are on the location, besides the mill.

LOCATIONS AD2, 3 AND 4.

Locations AD2, 3 and 4.

Lying to the west and northwest of 655P are locations AD 2, 3 and 4, which are held under lease by Messrs. Campbell, Lavin, Fawcett and Handlan of Duluth, embracing in all 160 acres. Gold was discovered on AD2 in March, 1894, and in the following month the three locations were surveyed. The vein on AD2 is apparently a continuation of No. 1 vein on 655P. It runs along the northeast face of a granite hill and is well exposed for a length of 300 yards, pinching out towards the north where the granite comes into contact with the green schist. Two openings have been made upon it, one to a depth of 10 feet showing solid quartz of 16 inches wide and a number of stringers; at the bluff on the northwest side of the hill a cross-cutting has been made to a depth of 15 feet, where the formation changes, and there the vein is apparently cut off. Another vein on the same location has a course nearly east and west, and on the northwest face of the bluff approaches within 30 yards of the first vein. Trench work has been done upon this end to a depth of 15 feet, and at the contact the vein is not more than a foot wide. Farther east, in the granite, it widens to three or four feet, as shown at several points where it has been stripped. The development work was carried on upon these veins during April, May and June of last year, when five miners and three laborers were employed. The other two locations have gold-bearing veins also, but little or no work has been done upon them.

THE FOLEY MINE.

Wiegand Gold Mining Company.

The only active mining work in the district at the time of my visit was carried on upon locations AL74 and 75, about two miles west of Mine Centre, and known as the Foley mine. These properties are reached by canoeing across the bay to a dock upon the point marked on the map as Wiegand P.O., from which a good road has been constructed half a mile north to the mining camp. The details of the work carried on are furnished in the following entry, which I made in the Inspector's Book under date of 2nd September:

The Foley mine.

Entry in the Inspector's Book.

"This day I visited on behalf of the Inspector of Mines locations AL74 and AL 75 in the Rainy Lake district, and found Mr. Joseph C. Foley in charge of the works for the Wiegand Gold Mining Company.

"The Company, organized under the laws of the State of Minnesota, are leaseholders from Mr. Foley of AL75 for a period of ninety-nine years (Mr. Foley having purchased from Messrs. Wiegand, Ray and Green on 16th November, 1894), and on 20th July, 1895, they procured an option on AL74 and AL 76.

"A vein having a course about 10° west of north appears to extend across locations 74 and 75, the width of which at outcroppings varies from eighteen inches to three feet.

"On No. 5 vein, AL75, a shaft 6 by 9 feet has been sunk to a depth of 44 feet. The width of the vein at the surface is eighteen inches, but pinches to a foot or less in places in the shaft. The dip is nearly perpendicular for about 25 feet, when it changes to 80° east. The formation is solid, and with 14 feet of substantial crib work at the top of the shaft it appears to be safe for carrying on development work.

"On location AL 74 a shaft, called the Bonanza, has been commenced upon what is believed to be the same vein, on the hanging wall, and has been sunk to a depth of six feet. The width of the vein is three feet, and its dip 72° east. Its course is about 10° west of north.

"At the northeast corner of AL 75 a shaft has been put down on what is known as No. 9 vein. It is 5 by 6 feet, well timbered to the water, which rises to within ten feet of the surface. The depth of this shaft is said to be 31 feet. The width of the vein at the surface is 2 feet 9 inches, and its course nearly north and south.

"Machinery is in course of being placed at the shaft on No. 5 vein, AL 75, manufactured by the Ingersoll Rock Drill Company of Canada. The plant consists of two boilers, one of 30 and one of 20 h.p.; and two engines, one rated at 30 h.p. to drive an attached air compressor, and one at 25 h.p. to drive a double drum hoist which is intended to serve each of the two shafts. Steam was got up in the larger one of the boilers to-day.

"Water for the boilers is procured from a dam erected upon a small creek about 600 yards distant, which is lifted through a two-inch pipe by a force pump to a tank at the engine house.

"The buildings are on AL75, and consist of a tool house, blacksmith's shop, cook camp, office, miners' sleeping camp, assay office and powder magazine.

"There are in all 22 workmen employed, including 6 miners who work day and night shifts in the shaft commenced on location AL74. The others are carpenters and laborers.

"A good road has been built from a dock at Shoal lake north to the shaft on AL75, and is being continued to the Bonanza shaft on AL74."

The Wiegand Gold Mining Company was formed early in 1895, and the purpose of the Board of Directors, as stated by Mr. Foley, is to sink each of the two shafts to a depth of 400 feet, and to further prove the ground by drifting along the vein or veins (for it is not absolutely certain that the two shafts are on one vein) before any steps are taken to erect a mill for treating the ore.

Through Mr. Charles J. Hollands, the Crown Lands agent at Fort Frances, I have received information of the progress of work on those two locations down to the middle of March. Mr. Hollands reports that the shaft on AL 74 had, on the day of his visit, reached a depth of 200 feet, the size of it being 8 by 10 feet. At 100 feet a level had been driven along the vein 43 feet; another at 150 feet, a length of 18 feet; and a third at 200 feet was just commenced. At the surface the vein was 42 and 36 inches respectively at opposite sides of the shaft, while at the bottom it was 26 inches, and the average from top to bottom was 20 inches. About two tons of ore were shipped to New Jersey for treatment, "and the results of this experiment and the developments on the property between this date and the first of June will determine whether the Company will take the property or not. If they take it," Mr. Hollands writes, "which is altogether likely, a twenty-stamp mill will be at once put on the property." The shaft on AL 75 had been sunk to a depth of 113½ feet, and at the bottom the vein was "split up into a number of small stringers, none of them more than a few inches. The walls however are good, being, in mining phraseology, slickensided. No drifting on the lead has been done as yet, and work on this shaft has been stopped for the present."[26] Reports of progress.

LOCATIONS AL103, 104, 105 AND 106.

Locations AL 103, 104, 105 and 106 occupy a block about a mile north of Shoal lake, and nearly north of AL 74 and 75, each comprising 40 acres. They were surveyed and taken up in August, 1894, by Messrs. A. Lougheed, William Wiegand and Charles J. McLean. Prospecting work was done on each of them last summer, four men having been employed steadily since the middle of April. Headquarters are on AL 106, where a camp has been built. Three veins on AL 103 have been explored by pits, crosscuts and trenches. The most easterly of these veins is across the northeast corner of the location, its course being nearly northwest and southeast. It has been stripped at two points, and at one place shows a width of 12 feet 8 inches. Farther on it is broken, and the width is reduced to 6 feet. The same vein extends into AL104, and where stripped at the southeast corner of it the width is about 2½ feet, showing free gold. For a great part of its length this vein consists of white quartz, carrying some iron pyrites; and in other places Locations AL 103, 104, 105 and 106.

[26] The Wiegand Gold Mining Co. has this year disposed of its locations to a new proprietary, organized as the Ontario Gold Mining Company, composed of capitalists in New York and Detroit, with J. C. Foley as general manager at the mine, Rodolph A. Demmé of Detroit as president, and Colonel Thomas J. Hurley of New York city as treasurer. An official report made by the general manager under date of 15th July (as this report is going through the press), shows that the deeper (No. 3) of the two shafts sunk on what is called the Bonanza vein had reached 210 feet, with a drift of 97 feet on the 100-foot level, of 116 feet on the 150-foot level and of 86 feet on the 200-foot level. The report states that at the second level the vein at the end of the south drift is very strong, while at the end of the north drift of the third level it is a little over 5 feet wide, "showing free gold and looking extremely well." The No. 5 shaft had been sunk to 113½ feet, and on other veins six pits or shafts had been opened to depths ranging from 6 to 31 feet. A new vein had just been discovered on the southern end of the property which is described as very strong in free coarse gold, "thus making on our property," Mr. Foley says, "nineteen well-defined veins, the largest of which is 8 feet wide." Work is in progress for setting up a twenty-stamp mill, which the manager hopes to have in running order in October. "Please note," he observes of the Bonanza vein, "the gold does not form in large nuggets, but is evenly disseminated through all the vein; that is to say, that while some of the vein matter is richer than others, it is not a vein with a pay streak, as there is no barren rock. Everything between the walls brings good milling ore, and all will go to the mill."

Exploration work.

the quartz is of a reddish or rusty brown color. Its length, as shown by exploration on 103 and 104, is 1,500 feet. Where it crosses the crown of the ridge on 104 the vein is finely polished and rounded by ice action, and shows glacial striae running east and west. Little work has been done upon the other veins of 103, but enough to show that they lie parallel with the larger vein; they vary in width from 2 to 6 feet. On 104 no other vein is known to exist but the large one above described. On 105 there is one vein with a course 25° west of north, with a ruddy looking ore that carries some free gold. It has been traced ten chains on 103, and samples of the ore pan gold. On 106 there are two veins, one of which is broken up in the country rock and gives many showings of free gold near the surface. A pit 10 feet deep opens a vein 6½ feet between the walls, but enclosing in the quartz a horse of country rock 2½ feet wide. It has been crosscutted at three other points farther north, at all of which the ore gives gold colors in the pan. On the west side of this location is another vein running nearly north and south, 8½ feet between the walls—2½ feet of quartz and 2 feet of slate on each side of it. A pit 6 feet deep has been opened on this vein, and the ore shows a little gold when panned. The owners had expended, to the time of my visit, $1,200 in development work, and intended to carry on operations until October.

The descent from the granite bluff north of the camp on AL 106 to the level of Shoal lake, a length of half a mile, is 170 feet, as indicated by an aneroid. The lake itself changes its level much between high and low water, and owing to the gentle slope of its bed the shore line shifts in places as much as 50 and 75 yards between high and low water marks.

Mine Centre to Fort Frances.

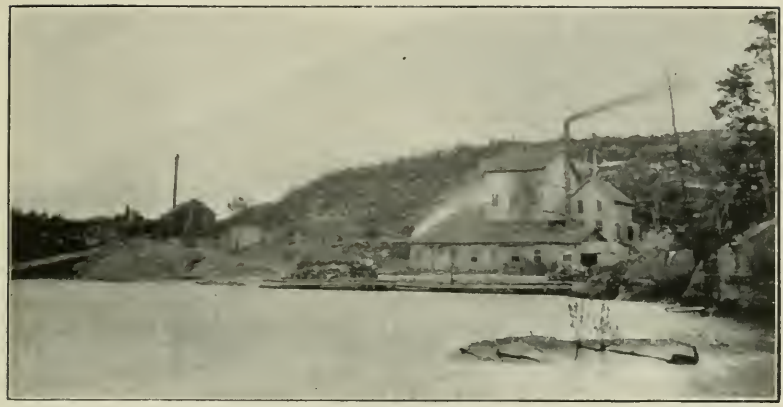
By steamer to Fort Frances.

The steamer Maple Leaf was put on the route from Fort Frances to Mine Centre in the early spring, and while there was a rush of explorers she made three trips weekly. But traffic fell away during the summer, and for some time she ran two trips weekly. In September she made only one trip weekly each way. We left Mine Centre at 9.07 in the morning and at 9.40 called at Seine River City, where the Seine river emerges from Shoal lake. The site is on the north bank of the river, and the "city" itself consists, besides two or three small houses, of two hotels, one of which is a frame building, which alone was occupied; the other is built of squared logs. Surveyor Proudfoot had his head-quarters in a capacious tent; and besides him the chief citizens were surveyors Roland and McCallum.

Seine River City.

Shoal lake to Rainy lake.

We left the city at 9.55 and after steaming down a mile of river entered another shallow expansion known as Grassy lake. A stream coming in from the north brings down the waters of Vermilion lake. At 10.30 we reached the foot of the lake and tied on the south bank to wood up for the lake trip. This occupied three-quarters of an hour, and in another half-hour we reached the mouth of the Seine at Kettle point, and entered the northeast arm of Rainy lake known as Seine bay. There is a fine bit of scenery down



Sultana Mine in 1895, p. 177. From a photograph by Dr. George M. Dawson.

Sultana Mine in 1896, showing the new camp and the chlorination works to the left, p. 177.

Regina Gold Mine and Stamp Mill, p. 182.

View across Regina bay, looking northeast from the Regina Mill, p. 185.

this bay, and indeed for the whole length of the sail over Rainy lake and among its scores of islands; but the fog, mist and rain which prevailed during half the passage interfered to some extent with the sights which the lake affords.

Lyle mine and Sand Point City.

I had intended calling at the Lyle gold mill and mine, which we passed about midway down the lake, but was told by the captain that the Maple Leaf is not allowed to land passengers at American ports or posts. That is a privilege, it seems, that is only shared by boats duty licensed, or boats flying the American flag, although I did not see or hear of an American flag on the lake. However, the mill was idle, and it was reported that the mine did not contain any ore. Sand Point City on the Ontario side of the boundary, nearly opposite the Lyle mine, is a city with one inhabitant.

Rainy lake and its outlet.

Besides the Seine river, Rainy lake receives several tributaries from the north, and a large volume of water pours into its southeast arm from the chain of lakes along the international boundary. Its outlet, the Rainy river, is therefore a much larger stream than the Seine, and one gets an experience of the strength and force of it at the outset, in the seething rapids which play see-saw with the boat at the rounding of Pither's point, where the river emerges from the lake. Our exit was made at 3.15 p.m. and the boat tied up at her dock at Fort Frances at 3.30. The distance from Mine Centre in a straight line is 36 miles, or by the course of the boat about 42 miles, and the actual running time was 5 hours 23 minutes.

THE TOWN OF FORT FRANCES.

The site of Fort Frances.

Fort Frances has grown little since my first visit to it in 1891. A few new dwellings have been erected in the eastern part of the town plot, near the river front, and other handsome cottages were in course of erection; but the business part of the town has not changed, and hardly an attempt has been made at street building. It is however a beautiful site for a town, viewed from the river either above or below the falls; and the ease with which a system of sewerage may be introduced, superadded to the natural advantage which a dry sandy soil affords, makes the problem of sanitation a very simple one. Fort Frances ought to be a delightful summer resort, with its fine climate, bracing air, pretty scenery and facilities for boating. The graceful long-branching ashes, elms and oaks[27] at Pither's point suggest a very desirable improvement which might be made by the planting of shade and ornamental trees, for the town plot is almost bare of tree life. At present Fort Frances is the head of navigation on Rainy river, for although a lock to overcome the falls was commenced twenty years ago it is not completed yet, the work having for some cause been abandoned in an almost finished state when the change of Government took place at Ottawa in 1878. With this lock ready for use boats could run without breaking bulk from Rat Portage to Kettle falls on the Namakan river, to Sturgeon falls on the Seine, and to all

Fort Frances lock.

[27] Sir Alexander Mackenzie, who travelled in the country about a hundred years ago, mentions only oaks as the trees of the point. Mr. C. J. Hollands, Crown Lands agent at Fort Frances, writes me that "the timber at the point is mixed oak, elm, ash and soft maple, the elm and ash preponderating."

points along the extensive and sinuous north coast line of Rainy lake. It would be a great boon to lumbermen and miners operating around and above the lake, and could not fail to be a benefit to Fort Frances also. The completion of this work is all the more desirable now in view of the early settlement of lands on the American side of Rainy river. The water power at the falls, now running waste, will no doubt be utilized in a very few years, and will not fail to add to the prosperity of the town. The rich agricultural lands along the river, the extensive forests of pine and pulpwood upon Rainy lake, its long arms and tributary rivers, and the discoveries of gold-bearing ores in many localities north and east of the lake easily reached by small steamboats and canoes, give promise of the establishment of industries here which will make the district one of the most prosperous in the Province. A town has been started on the Minnesota side, opposite Fort Frances, but as yet it contains only ten or twelve houses.

Pioneers of the region.

The fur traders were the pioneers of the region, and as long ago as 1731 La Verandrye built Fort St. Pierre at the head of Rainy river, on what is now called Pither's point. The ruins of this fort, Mr Pither has informed me, may still be seen there: but a more noticeable feature is the Indian mound on the point, close to the rapids.[28] Some time during the last century the Hudson's Bay Company established a post on the right bank of the river, below the falls, on the same site as the one which the company now occupies; and the rival Northwest Company built a post on the same side, about a mile lower down, while the Astor Company occupied a station on the opposite side of the river. In 1821, when the Hudson's Bay and Northwest Companies were united, the

[28] In an application to the Crown Lands Department under date of June 4, 1895, for a grant of land on Pither's point for missionary purposes in behalf of the Indians of Rainy lake and river, Rev. L. P. A. Langevin, Archbishop of St. Boniface, gives the following succinct history of the fort:

"1. In the year of our Lord 1731 the first fort built by white men on the other side of the height of land, near the rapids of Coutchichin, about a mile and a half from Fort Frances, Ontario, was called 'Fort St. Pierre,' in honor of the famous discoverer, Pierre Gaulthier de Varennes, Sieur de la Verendryie.

"2. The builder of the said fort St. Pierre was Mr. de la Jemerays, the nephew of Mr. de la Verendryie, and the brother of the venerable Mere d'Youville, the foundress of the Grey Nuns of Montreal.

"3. The two gentlemen were the ancestors of the late Most Rev. Archbishop Tache, my saintly predecessor, who was very anxious to purchase that historical spot.

"4. I have seen all that appears to remain of that historical old fort—a few stones scattered around the excavations—but the half breeds say that they have seen wooden buildings there.

"5. The site of the fort is adjacent to an Indian reserve (Coutchichin), where we have a mission and a school."

In the records of his Voyages, made in 1789-93 and written in 1801, Sir Alexander Mackenzie says (p. lvi): "The discharge of this lake [La Pluie or Rainy] is called Lake de la Pluie river, at whose entrance there is a rapid, below which is a fine bay, where there had been an extensive picketted fort and building when possessed by the French; the site of it is at present a beautiful meadow, surrounded with groves of oaks."

Dr. Bigsby, who arrived at Fort Frances (or Fort Lapluie as it was then called) on 14th July, 1823, on his way to Lake of the Woods, gives the following account of the fort on the American side of the river: "Walking out the morning after our arrival with Mr. W. McGillivray, the Lieut.-Governor, I saw on the opposite side of the river some buildings, and a tall, shabby-looking man, angling near the falls. I asked my companion what all that meant. He replied, 'The two or three houses you see form a fur-trading post of John Jacob Astor, the great merchant of New York. The man is one of his agents. He is fishing for a dinner. If he catch nothing he will not dine. He and his party are contending with us for the Indian trade. We are starving them out, and have nearly succeeded.' The expedients for preventing a rival from entering a rich fur country are sometimes decisive. Every animal is advisedly exterminated, and the district is ruined for years." Shoe and Canoe, vol. II, p. 273.

latter's post was abandoned. As late as 1857, when Prof. Hind conducted his expedition to Red river, the buildings of the Hudson's Bay Co. were surrounded with a stockade; but about twenty-five years ago a fire destroyed the store and warehouses, the only building saved being the factor's dwelling house, then newly constructed. The stockade appears to have been destroyed at the same time.

Headquarters for prospecting parties.

Many of the prospectors employed in exploring for minerals north and east of Rainy lake make Fort Frances their starting point, and they come back at frequent intervals to replenish their camp supplies. Surveying parties also find it convenient to make the town their headquarters. I met a number of persons of each class, most of whom had come down from the Manitou and Wabigoon districts. Glowing accounts were given of discoveries made there during the past season, and if the properties realize when worked the half of what is claimed for them some fortunes will surely be made. One of these properties is situated north of the Lower Manitou lake, on the east side of Niven's sixth meridian line and near the 41st mile post, being locations HP 304 and 305. Besides gold-bearing quartz veins in the rock, it is claimed that gold in paying quantities is contained in the drift. The placer is a mile in length by three chains in width; pits have been sunk in several places to the rock, which is eight feet below the surface; and it is stated that the gold is well distributed throughout the drift. The discovery was made by three brothers John, August and Eric Fransen and George Aspelund of Rainy Lake City, and is known as the Swede Boys' Claim. They had associated with them last year John Berg, a merchant of Rainy Lake City, who was furnishing the capital, and sluice boxes were sent up to work the placer. Since then a company with headquarters at Kansas city, known as the American Gold Mining Company, has secured the interest of the discoverers in HP 305 along with two adjoining locations, and is preparing to work them. In the prospectus it is stated that three veins have been explored on the locations, one of which has a length of over 3,000 feet and an average width of 7 feet.

Placer mining.

The Swede Boys' claim.

Geological Survey work.

Mr. McInnes of the Geological Survey, who had been employed during the summer in the district north of Rainy lake, had finished his work there and he came in to Fort Frances a day or two before my arrival. Like myself, he was waiting to take the boat for Rat Portage on Friday morning.

ON RAINY RIVER AND LAKE OF THE WOODS.

Settlement on the Rainy river.

Being desirous of getting a better view of the farm lands along Rainy river than the deck of a steamer affords, I left Fort Frances with my son at 2 o'clock Thursday afternoon (Sept. 5) and canoed down about sixteen miles. The current is strong most of the way, and paddling was easy. Nearly every lot along the Ontario side has been taken up, and nearly all were under crop; but in many cases the houses were unoccupied. There were many good fields of crops—spring wheat and oats, but chiefly the latter—showing a vigorous growth of straw, and the heads well loaded with grain. Beans thrive well also, and in the garden plots onions, beets, cabbage, turnips, etc., grow luxuriantly.

Indian Reserve No. 10.

We called for a few minutes at an Indian encampment on Reserve No. 10, opposite Little Forks river and between the townships of Roddick and Woodyat. It is a small reserve, comparatively, having an area of less than 2,000 acres, and only a few Indians occupy it. The chief of the band, George, was employed with his squaw drawing in and stacking grain, using for the purpose a primitive conveyance of two poles about 15 feet long, like a hand-barrow, upon which the loose grain was piled to the size of a hay-cock. The chief was a tall, well made and handsome looking fellow, with features which a statuary might love to copy. He was a contrast indeed to the other members of the band at the camp, who were common looking and idle fellows, but who possessed one advantage over him in being able to talk a little English.

Social life.

A row boat with sail set had preceded us some distance down the river, carrying six or seven persons picked up at settlers' houses along the way. They were going to a dance at Big Forks, ten or twelve miles down on the American side, given in honor of a family that was moving out. I met them returning at 9.30 next morning, along with another party, and apparently they had had a jolly night of it. All settlers on the river are neighbors if they live within ten miles of each other.

A settler's home.

We put up for the night at the house of Duncan Fraser, who occupies a large farm sixteen or seventeen miles below Fort Frances, in the township of Woodyat. Mr. Fraser and his neighbor Mr. Luttrell had been busy in the harvest field all day; and after supper they too went off to the dance, and did not return until next morning. The farm is finely situated on the river, with gently sloping banks which rise from the water's edge to a height of 25 or 30 feet 75 yards back. A settler who had taken up 700 acres, when the Dominion Government exercised control, sold his interest in it to Mr. Fraser eight years ago, but as yet a patent has only been issued for a homestead of 160 acres. A strong pole fence has been built along the whole front of the farm, leaving an allowance of 66 feet on the river for right of access by boats and right of use for fishery purposes.[29]

Wannigans.

Three large scows covered over with lumber like shanties were beached on the bank in front of Fraser's. They are used by lumbermen when driving logs in spring, and also by the Government road contractors for the cooks, being moved down stream as the work progresses. These scows are known locally as wannigans. In New Brunswick, Mr. McInnes informed me, they are known as wangans, or wangan boats, used by the log drivers for carrying supplies.[30]

[29] The Crown patent of lots reserves "right of access to the shores of all rivers, streams and lakes for all vessels, boats and persons, together with the right to use so much of the banks thereof not exceeding one chain in depth from the water's edge as may be necessary for fishery purposes."

[30] "Wangan" is defined by the Standard dictionary as a flatboat used by Maine lumbermen for transporting their tools and provisions, and "wannigan" [western United States] as a flat bottomed boat on which a house is built, located on the shore or bank of a river, and intended to float in case of flood or high water. The settlers on Rainy river have adopted the term as used in the western States, while the other term is common to the loggers of New Brunswick and Maine.

We left Fraser's at 8.30 Friday and reached Holmes' dock two miles below at 9 o'clock to await the boat from Fort Frances, which had gone up late the previous night. Mr. Holmes has a small store here, and is building a much larger one with a dwelling house attached. A young farmer alongside of him, who came from Wawanosh township in Huron county, is doing well. He has a number of Indian curiosities, among which is a copper spear-head five inches long and beaten to a point, nearly square in shape and with a half-formed eye to receive the handle. The young man found it in the clay of the river bank, near Holmes' dock. His sister, a bright young woman, told me that their father in Wawanosh has a fine collection of relics.

At Holmes' dock.

Indian curiosities.

A road has been built out from the river at Holmes' dock a distance of four miles, and there are settlers two miles beyond the end of the road. The drain on the roadside has already cut a gorge 15 feet deep and about as wide at its mouth, which extends 60 yards from the river. The cutting shows three different beds of alluvium, all with horizontal lines of bedding. The upper one is about six feet thick, of grayish clay; the middle seven feet thick, of peaty colored clay; and the lower one of layers about one inch in thickness of gray and black, exposed to a depth of two or three feet. The even lines of bedding indicate that the silt was deposited in still water, and not in a running stream.

Character of the alluvium.

I was told by Mr. Luttrell (who was formerly a resident of Wellington county) that the land rises gradually back from the river, and that the muskeg which extends in a long line and a mile in width, parallel with the river, through the townships of McIrvine, Crozier and Devlin, may easily be drained into it. A small lake about 30 acres in extent in the centre of the muskeg depression in Crozier, which has been tapped by a drain, has been lowered several feet already. The level of this lake as taken by Mr. Whitson of the Crown Lands Department was found to be 72 feet higher than the ordinary water level of the river. For long stretches small streams fall into the river at intervals of 100 to 200 yards, giving to the bank a fine flowing outline.

The drainage into Rainy

Settlement on the Ontario side extends all the way from Fort Frances to the mouth of the river, exclusive of the Indian reserves, and everywhere the soil appears to be uniformly good—a finely silted clay and clay loam, holding a great number of limestone pebbles. All the farmers with whom I spoke are delighted with the country and its suitability for settlement. The low land they say can easily be drained, and crops never fail. Clover and timothy yield well, and only in one year have the spring frosts been known to heave the clover; the seed crop of clover also matures well. There are few fruit trees yet, and I learned of only one attempt to plant an orchard. A lot of crab-apple trees were set out by one settler a few years ago, all of which died; but it is stated that they were delivered late in the year and that their roots were frozen before they could be planted.

Suitability of the district for agriculture.

A few settlers are coming in on the Minnesota side, and it is expected that the whole river front will be thrown open this year. Surveying parties and timber agents were busy all last summer getting the territory ready on

The Minnesota side of the river.

behalf of the United States Government, and another Oklahoma rush was confidently expected by the surveyors and agents.[31]

ON BOARD THE EDNA BRYDGES.

Freight and passenger traffic.

The Edna Brydges left Fort Frances at 7 o'clock in the morning, and at 9.30 we got on board of her at Holmes' dock. Towards noon a wind storm came up the river, which increased steadily in force until it became a furious gale. There is a fair amount of traffic on the river; almost every farmer has a dock of his own; and wherever passengers or freight are to be taken on or landed, the boat is accommodating enough to call. But the wind and waves made it a hard task on this trip, and repeated attempts had to be made in many cases before the boat could be brought in to tie up at the dock. It was 8.30 before the mouth of the river was reached, and the wind being too high to venture across the sand bars outside of Oak point, we stayed there for the night. From Fort Frances to the river's mouth the distance according to Hind's measurement is 77 miles 55 chains, and the descent measured from the foot of the falls is 31 feet.[32] The navigation of Rainy river would

[31] The Red Lake Indian reservation in Minnesota extends from the mouth of Black river, one of the tributaries of Rainy river, westward to the western side of Lake of the Woods, and contains what is probably the largest body of virgin pine left standing within the bounds of the United States. A large amount of this forest is included in the part of the reservation to be thrown open for settlement. It will not however be taken up by settlers, but will be sold at auction on the 1st and 15th days of July, 1896. The minimum price of the stumpage is placed at $3 per 1,000 feet.——The reservation was thrown open on 15th May of the present year, (after the text of this Report was in type) and the following account of the rush of settlers is published in Harper's Weekly of June 6: "The reservation has been the home of the Chippewa Indians for centuries. They are a remarkably peaceable and friendly tribe. The portion which was opened May 15 was bought from the Indians under treaty provisions. It is estimated that there are at least eight hundred thousand acres of land which will be found arable. The settlers pay $1.25 per acre for it, with incidental registration fees amounting to about fifteen dollars, and have five years in which to pay for the land. As early in the year as late February and early March prospective settlers from surrounding States began their long overland journeying to the region. The winter was favorable to such migration; but about the 1st of April heavy rains set in, discouraging many settlers, and causing many to return to their homes. As the date of opening approached however there were a good many thousands of settlers in the region. Some of them staid conscientiously at the line over which they were not to pass until the stroke of nine on the morning of the 15th; others waited at the land office at the town of Crookston, preferring to make filings upon the land they wanted before going upon it, believing that priority of filing would beat priority of location when it came to a contest; while many others, and by far the larger number, if one is to judge by personal investigation as well as by report, did not wait for any opening gun to be fired on opening day, but calmly moved upon the reservation many hours before the opening time, and located themselves on the land of their choice. Of course this was all contrary to law and to the special telegraphic instructions of Commissioner Lamoreau that no settlers be allowed on the reservation before the hour of opening. It would have been practically impossible to prevent the settlers however from entering upon the reservation, as it would have required a military force large enough to patrol a line at least 300 miles long to keep them from making entrance. So there was no obstacle whatever placed in the way of the settlers, and many of them entered the lands long in advance. Of course, when it comes to filing at the land office, it may transpire that these settlers have forfeited their rights by thus going upon the land in advance, but it will be difficult in many cases to establish evidence against them. At Crookston, the nearest land office, and the point where all filings must be made, the line of filers began to form four days before the time of legal entry. Quite a number of fellows, who only cared to sell out their place on the day of opening, or who were trying to file upon good pieces of land merely for the sake of selling out to some gullible home seeker, remained at the head of the line ninety-six hours. By far the greater number of those who were desirous of effecting entrance on the reservation were thrifty young fellows—Americans, Norwegians and Swedes predominating—who had come for the purpose of making homes in the new land."

[32] The length of Rainy river from Fort Frances is taken from the table in Appendix I., vol. II., pp. 399-402 of Hind's Narrative, and the total length by the same authority is 79 miles, 55 chains. But as measured on the MS. map in the Crown Lands Department, prepared from notes of surveys of townships and Indian reserves, the actual length is 86 miles. From Pither's point, where the river flows out of Rainy lake, its course is a point south of west, 5½ miles in front of McIrvine township to near the west line of section 13 in Crozier.

be greatly improved if the rocks in the Manitou and Long rapids were blasted out, and owing to low water last year several accidents occurred in these parts of the channel.

Grand traverse of Lake of the Woods.

The boat left for Rat Portage at the foot of Lake of the Woods at 6 o'clock Saturday morning, with the wind still high, and she experienced rough weather in crossing the grand traverse of 30 miles to the shelter of the islands. We took up a party of excursionists from a fishing boat in a bay upon the east side of the lake, near to one of the numerous sand banks there; and the water being only six or seven feet deep, with the waves rolling high, the keel of the Edna Brydges bumped over and over again upon the sand bottom. But as long as there were no rocks, there was no danger.

The fisheries of the lake.

Fishing is now a very important industry in Lake of the Woods. There are stations on all the principal bays, and a number of tugs are employed to make regular rounds and convey the catch to Rat Portage, where shipments are made to Winnipeg, St. Paul, Minneapolis and other markets throughout the Northwest. The sturgeon and whitefish of Lake of the Woods are of excellent quality; but at the rate at which operations have been carried on during the last two years it is feared that the waters will soon be fished out The roe of sturgeon is shipped in large quantities to Europe, where it is manufactured into caviar.

Through the archipelago.

The northern half of Lake of the Woods is an archipelago, and a sail through its hundreds of islands is most delightful at any time during the season of navigation, but especially in the early days of September, when the trees begin to present the rich and varied tints of their ripening foliage. Fifty years ago (10th September, 1845) Ballantyne crossed this lake by canoe from Rat Portage to the mouth of Rainy lake, and he has left a glowing

It then flows south on the east side of Crozier and Roddick about 3½ miles, when it bends around to the west and flows in that direction 17 miles along the townships of Roddick, Woodyat and Aylsworth, to the line between sections 22 and 21 in the last named. Indian Reserve 10, having a width of a mile and a half, lies between Roddick and Woodyat. Lavallee river comes down from the north, through the townships of Devlin and Woodyat; while from the Minnesota side there join the larger tributaries of Little Forks opposite the Indian reserve, Big Forks opposite the line between Woodyat and Aylsworth, and Black river opposite section 21 in Aylsworth. Here it turns northwest 2 miles and then north 7½ on the west of Aylsworth and Lash to the line between the latter township and Barwick. Again it flows west 19 miles in front of Barwick (which is divided by Indian Reserve 11), Roseberry, Indian Reserves 12 and 13 and Morley. Manitou rapid and its one Indian mound occurs about midway across Reserve 11, and the Long Sault rapids in front of Reserves 12 and 13, where there are two large mounds. Sturgeon river comes in from the north, through Dobie and Shenston and the southeastern corner of Reserve 12. At the southwestern corner of Morley, opposite section 6, the river bends northwest and continues in that direction 5½ miles to the mouth of Pine river in Dilke. For the next 5 miles it flows nearly west, to section 26 in Worthington, and southwest a mile to section 22 in that township, opposite the mouth of Muttontina river on the Minnesota side. It then flows west 4 miles along the front of Worthington to section 25 in Atwood, where is the extensive booming ground of the lumbering companies. At the mouth of Beaudet river on the Minnesota side the trend of the river is northwest 9½ miles, by Atwood township, the wild lands reserve and half-way across Indian Reserve 37; and thence northward 6½ miles by Reserves 37, 14 and 15 and part of Spohn township, to its mouth in Lake of the Woods. In this long course the river lies south of the latitude of its head at Rainy lake (48° 37′) for a distance of 33 miles to Emo P. O. in Lash; the greatest point of deflection being in Woodyat, in latitude 48° 32′. For the rest of its length, 53 miles, it lies north of this line, the farthest point being the river's mouth, 48° 53′. In the latitudes here given I follow Thompson's survey map of the Boundary Commission, 1826. From Rainy lake to Lake of the Woods tracts of land aggregating 54,565 acres have been set apart along the river for Indian reserves. They are made up as follows: No. 18, on Rainy lake, 4,586 acres; No. 1 and No. 16, adjoining Fort Frances on the east, 170 and 160 acres respectively; No. 10, 1,920 acres; No. 11, 5,673 acres; No. 12, 5,047 acres; No. 13, 6,367 acres; No. 37 (Powawason), 3,687 acres; No. 14 (The Bishop), 3,983 acres; No. 15 (Paskon), 2,301 acres; and an unappropriated wild land reserve of 20,671 acres.

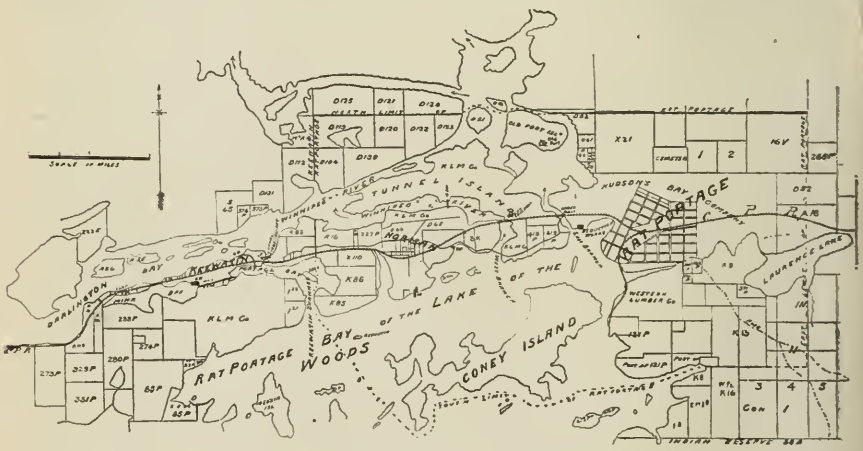
Ballantyne's pen picture.

description of the impression which the voyage gave him. "There is nothing, I think, better calculated to awaken the more solemn feelings of our nature (unless indeed it be the thrilling tones of sacred music) than these noble lakes, studded with innumerable islets, suddenly bursting on the traveller's view as he emerges from the sombre forest rivers of the American wilderness. The clear unruffled water, stretching out to the horizon—here embracing the heavy and luxuriant foliage of a hundred wooded isles, or reflecting the wood-clad mountains on its margin, clothed in all the variegated hues of autumn; and there glittering with dazzling brilliancy in the bright rays of the evening sun, or rippling among the reeds and rushes of some shallow bay, where hundreds of wild fowl chatter as they feed, with varied cry, rendering more apparent rather than disturbing the solemn stillness of the scene: all tends to 'raise the soul from nature up to nature's God,' and reminds one of the beautiful passage of Scripture, 'O Lord, how manifold are thy works! in wisdom hast thou made them all: the earth is full of thy riches.'"[33] Mr. Ballantyne made the trip from the lower to the upper end of the lake with a north canoe and eight men to paddle it in a day, which was fast time. The steamer Edna Bridges made it from the upper to the lower end in nine and a half hours of very stormy weather. The distance is 72 miles.

Lake of the Woods Gold Region.

Rat Portage and its early history.

"The Fort in the occupation of the Honourable Hudson's Bay Company at Rat Portage is beautifully situated on an island at one outlet of the Lake of the Woods. It is surrounded with hills about 200 feet high, and near it



Map of Rat Portage and Keewatin.

some tall white and red pine, the remains of an ancient forest, are standing amidst a vigorous second growth."[34] So wrote Henry Y. Hind in his Narrative of the Red River Expedition of 1857. There are three outlets from the lake, which unite below to form the Winnipeg river—one near the west side, a small stream now called Keewatin channel, where Keewatin village stands;

[33] R. M. Ballantyne's Hudson's Bay, pp. 271-2.

[34] Vol. I, page 107. "We arrived at Rat Portage, where the Great Winnipeg issues from the Lake of the Woods, on the morning of the 27th of August" p. 105.

one near the east side of the lake, close to the modern town of Rat Portage, called the east branch of the river, on which is the beautiful Hebe's falls; and the third and largest in the middle, called the west branch, on which is the Witch's cauldron, and the great dam recently completed by the Keewatin Power Company. The village of Norman, built on the island between the middle and western outlets, is now part of Rat Portage town, having been incorporated with it in 1892, but Keewatin has maintained an independent existence. On the old maps Portage du Rat is shown to be near the western channel.[35] Upon the left bank of the middle channel there is to be seen an old trail, now grown up with bushes; but the portage at present in use by the Indians is on the right bank of the eastern channel. Such however is the march of progress in our time that the oldest inhabitants do not appear to know where the original Rat Portage or the Hudson's Bay Co. post of that name stood. They will guess that it was here or there, and no one cares where.

The locations of Portage du Rat and the old H. B. post.

In Captain Palliser's Journals there is this entry under date of Saturday, July 4, 1857: "On coming to that portion of our route known as the Portage des Bois we found the lake waters so much above their usual level that we were able to sail right over it. We now continued threading our way among wooded islands during the remainder of the day, and at 5 p m. reached the Rat Portage at the head of Winnipeg river. The fall at the Rat Portage is only one of several outlets by which the waters of the Lake of the Woods escape, afterwards to unite in forming the larger river we were about to descend. The fall is of considerable height, and enclosed between high perpendicular walls of rock, and at a distance of four or five hundred yards further on the waters mingle with those of another stream, which, although of great width, we were surprised to find was spanned by a wooden bridge. The scenery here is very wild, having all the requisites for grandeur, such as dashing waters, rugged precipices, and variegated foliage. On the left bank of the river, opposite to where the portage path terminates, there is a small temporary trading post of the Hudson's Bay Company. We did not land at this place, but we obtained from the person in charge a small supply of sturgeon and whitefish.[36]"

Various opinions.

Captain John Palliser.

From Dr. Robert Bell of the Geological Survey I have received the following information: "I was at Rat Portage in 1872. The H. B. Co's. post was all that there was of it then. It consisted of two one-story log shanties—a sale shop and a dwelling. They stood on the west side of what afterwards

Dr. Robert Bell.

[35] It was at the head of Portage bay, now called Keewatin bay, and as nearly as may be along the line of the mill race of Dick, Banning & Co's. mill. On Thompson's map, 1826, it is called Portage de Rat. Yet in his MS. Journal under date of July 27, 1798, Mr. Thompson makes this entry: "N.B. The Rat Portage is on an island. A bold branch must certainly come down on the westward of the Rat Portage from the strong deep current we go down with till we meet with the main branch, which has its fall exactly opposite the island and comes out about one-half mile or one mile below it." In his record of observations for July 19, 1823, the portage is described as the "Muskrat Carrying Place." In Sir Alexander Mackenzie's Voyages, p. lix., that writer says: "The carrying place out of the lake is on an island, and named Portage du Rat, in latitude 49.37 north and longitude 94½ west, it is about fifty paces long. The lake discharges itself at both ends of this island and forms the river Winnipic," etc. Neither of these passages is very intelligible if the eastern channel be meant, as the portage there is along the right bank and upon the mainland.

[36] Journals, Reports and Observations relative to the Exploration of British North America by Captain Palliser, p. 34.

became the first and main street of Rat Portage. The shanties were at the same spot till 1882, when they were burnt and the company moved across the street and a little further south. By 1881 they had been replaced by clapboarded buildings, or the log ones had been clapboarded and built higher. . . My visit in 1872 was made when I came up the Winnipeg river and passed into the Northwest Angle The place was then a little outpost of the Company, with a small stock of goods for the Indian trade. The only clearing was the little space between the canoe landing and the shanties. All around was unbroken forest. . . In 1826 there might have been a post at the western outlet, but I never heard so."

Alexander Matheson of the H. B Co.

Alexander Matheson, factor of the Company at Red Rock, Nipigon, who has been a long time in its service is able to give more definite information concerning the portage and the post. "The old post," Mr. M. writes me, "was situated on an island a short distance below the falls of the eastern outlet of Lake of the Woods, and relics in the shape of parts of clay chimneys, etc., were to be seen there a few years ago. The Portage du Rat proper is west of the western outlet, at the place where Dick, Banning & Co's. sawmill is. The site of the old post is now known as Miller's island, and is nearly opposite the Rat Portage electric works."

Dr. John J. Bigsby.

For more precise and definite information concerning the Rat Portage however, it is necessary to go back of men now living. Richardson, Ballantyne, Thompson, Mackenzie and others have left records of travels from the river St. Lawrence and the great lakes to the Northwest; but the only minute reference to Rat Portage that I have come across is made by Dr. John J. Bigsby, who made a tour of Lake of the Woods in 1823 as secretary to the Boundary Commission under articles VI. and VII. of the Treaty of Ghent. "We encamped on the 18th of July," Dr. B. records, "on an islet near the mouth of the river La Platte, from fourteen to sixteen miles southwest of the Rat Portage. It comes from a very large and shallow lake of the same name.[37] . . . Towards the Rat Portage the country rises, and the scene becomes precisely that of the Thousand Isles on the St. Lawrence below Kingston, so exquisitely beautiful when seen on a calm evening when the shadows are long. We have the same low cliffs and morsels of rock, the same pines and birch in artistic groupings, the same deep and transparent waters. In one place, while our canoe was moving through the water rapidly, it received a sudden and startling shock. We had struck upon a sleeping sturgeon, which we traced in the troubled waters, making off with all speed. The Rat Portage, in north latitude 49° 46′ 22″ and west longitude 94° 39′, which leads from the Lake of the Woods into the Winnepeg river, its outlet, we reach by a narrow cul-de-sac, 600 yards long, ending in a grassy swamp, the portage lying between two eminences, naked but for burnt pines, a few cypress trees and poplars. This cul-de-sac is 120 yards broad at the portage, and is made offensive and foul by dead insects, the croaking of frogs, and the plague of mosquitoes. The hill east of the cul-de-sac, 200 feet high, gives an excellent idea of the envir-

[37] This water appears to be what is now called Shoal lake, which discharges into Lake of the Woods by the Shoal Lake Narrows. On the Geological Survey map it is also called Lac Plat, and on other maps its outlet is called La Platte river.

ons. It embraces the Lake of the Woods and the waters of the Winnepeg. We see from hence that the Portage is a neck of land fifty paces across, between the dirty cove in the lake and a magnificent sheet of water formed by the junction of the Winnepeg with a large river, whose name I could not learn, coming from the west;[38] and the united stream flowing down a prolonged woody valley. Wild islands of granite stud the west side of this basin, whose shores are high and naked, and backed by three ranges of lofty hills, either bare or covered with bright young verdure."[39]

On the maps of the Crown Lands Department only two outlets of the lake are shown, viz., the East Branch of Winnipeg river, east of Tunnel island, and the West Branch of it, west of that island. There is however another outlet, shown on some maps as Keewatin channel, through which in time of high water Portage bay overflowed into Mink bay, the latter being connected with Darlington bay at the railway crossing. This channel has been deepened to form a mill race for the Keewatin Lumber Company's sawmill, and the fall of water is 18 or 20 feet.

As to the location of the old H. B. post, Mr. Ap'John, Master of Titles at Rat Portage, gives confirmatory evidence of Mr. Matheson's statement. He writes: "I have interviewed Mr. Pither, who has acted as Indian agent at various points in the district, and he tells me that 'the Hudson's Bay post in 1846 was on an island below the falls, where the electric light power house now is,' that is, the eastern opening to the Winnipeg river." In the records of his office Mr. Ap'John finds that the island was granted as a mining location to one George Miller; hence the name of Miller's island, but on the maps of the Department of Crown Lands it is called Old Fort island. R. J. K. Pither.

It seems to be made clear by the foregoing that the name of Rat Portage (Portage du Rat) was given originally to the carrying place across the island from Portage bay into Darlington bay, near the limits of the present village of Keewatin, and that the site of the old H. B. post of Rat Portage was on Old Fort island. The town as incorporated by an Act of the Legislature in 1892 embraces an extensive area of land and water, as shown by the sketch map on p. 168.[40]

In 1885, when the first municipal census of Rat Portage was taken, it had a population of 870. In 1895 it had 2,965; and Keewatin, which did not have corporate existence ten years ago, had last year a population of 618. This prosperity is due in part to the construction of the Canadian Pacific Railway, which was opened through from Fort William on lake Superior to Winnipeg in 1883, and whose first train from Montreal to Vancouver passed

[38] Dr. Bigsby was in error in assuming this water to be a river. It is now known as Darlington bay, and receives from the west the overflow of a number of small lakes on both sides of the line of the Canadian Pacific Railway.

[39] The Shoe and Canoe, or Pictures of Travel in the Canadas, by John J. Bigsby, M.D., vol. II, pp. 302-4. Dr. Bigsby's memoirs were not written until 1850.

[40] By correspondence with Mr. Matheson and Mr. Ap'John I have succeeded in getting definite information regarding the old post, which has been laid down upon a sketch map by Mr. Pither. "The post was removed to the mainland in the summer of 1861," Mr. P. states, "and the buildings were put up near where the H. B. Co.'s store now stands on Main street. The reason for removing the post was the difficulty during the winter in crossing from the island to the mainland, as the ice was always dangerous owing to the strong current. The first time I passed was in the month of June, 1846, on my way from Lachine to York Factory, in the service of the H. B. Co."

The modern Rat Portage.

through Winnipeg on Dominion Day, 1886. The railway gave easy access to the prairie settlements of the Northwest, whose greatest want was lumber. Mills were built at Rat Portage, at Norman and at Keewatin to supply this market, and although the business has been overdone at times it has been on the whole steady and prosperous, and has given employment to large numbers of workmen at the mills, in the pine woods, and upon the rivers, bays and lakes where rafts of logs are driven or drawn; for all the timber on Lake of the Woods and its extensive tributary waters is cut at the Rat Portage and Keewatin mills. A third source of the prosperity of Rat Portage is the mining industry, although hitherto its progress has been slow. Canadians take kindly to lumbering; they have had a long experience of it, the value of a pine forest is easily estimated, and there is not much risk in an investment for one who knows how to make it. But with mining it is otherwise. Few men in Ontario understand it, or have had experience of it; and unlike the raw material of the lumbermen, the raw material of the miner is underground and must be explored at heavy cost. The business requires capital and skill, and if these are supplied the risks are perhaps no greater than in any other line; yet in by far too many cases with us it has been undertaken without adequate capital or skill, and the record of failures has been disheartening, although perhaps not any more so than in many other countries where mining has been successfully carried on. It is certain that in the Lake of the Woods region experience has shown the folly of attempting to work a gold mine without means or requisite knowledge; and the outlook is more promising now than ever before. All gold veins are not likely to yield the metal in paying quantities; if one in five or even one in ten do so, the field may prove to be as rich and attractive as gold fields elsewhere of established reputation. And a ten-stamp gold mill working the year round may do as much for the prosperity of a town like Rat Portage as one of its largest saw mills. The latter may overstock the market with lumber, as indeed they have been doing within the last two years; but a hundred mills placed on Lake of the Woods to treat ore, if they produced gold bricks every week with the regularity of the Sultana mill, would not glut the gold market nor weaken the price of the metal by the weight of a hair.

Sources of its prosperity.

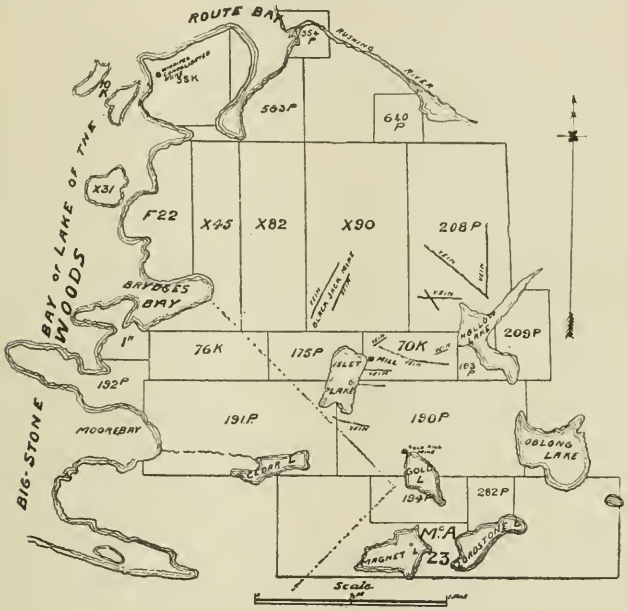
THE GOLD HILL LOCATIONS.

The Director of the Geological Survey.

Dr. George M. Dawson, Director of the Geological Survey, arrived by the Sunday evening train from the west, and stayed over at Rat Portage for a day. He had been up at Athabasca Landing, north of Edmonton, in Alberta Territory, inspecting the boring operations there in prospecting for petroleum. We arranged to visit the Gold Hill locations together on Monday, September 9th. Mr. Robert H. Ahn, manager of the Dominion Gold Mining and Reduction Works Co., was going out with his tug and a scow load of supplies for the camp at Gold Hill, and he kindly offered us a passage. It was 10.45 before the little tug could leave its dock, and with a head wind against us it was one o'clock in the afternoon before we reached the company's new dock in Brydges bay. The route lies south through the Devil's gap (which Dr. Dawson remarked should be called by the more appropriate name of Gabriel's

gate, for its singular beauty), and thence southeast by Bare point and Quarry island, and between Heenan's point and Needle point across Big Stone bay. Instead of continuing on through Eagle Pass to the old landing in Moore bay, we entered a small bay about a mile to the north of it known as Brydges bay, where a new dock has been built, and from which a good road has been cut in to the Black Jack mine. It is a very good road, saving for one steep hill, which on its western slope is covered with Laurentian boulders. The distance from Rat Portage is in a straight line twelve miles, but by water it is about fourteen miles. Near Bare point we met the Regina Company's steam launch,

From Rat Portage through the Devil's gap to Brydges bay.



Map of Gold Hill, Black Jack and Golden Gate locations.

on board of which were General Wilkinson, president of the company, who was leaving for England, and Mr. Motley, the general manager, and the usual salutations were exchanged. I had an opportunity of meeting General Wilkinson before he left Rat Portage, and found him in high spirits over the prospects of the Regina. He had in his possession many fine samples of ore from the mine, and the first brick produced at the mill, which he was taking with him to exhibit to the shareholders in England.

General Wilkinson of the Regina mine.

The Dominion Gold Mining and Reduction Company, Limited, has been organized under the Companies' Acts of Great Britain, 1862 to 1890, with head offices in London, Eng., and among the objects for which it has been established are the following: "To prospect, search for, get, win, work and raise gold, silver, coal, iron, ironstone and other ores, metals, minerals and substances whatsoever, whether by open or underground workings, and to carry on the business of miners, millers, smelters and workers of any processes in the production, reduction and making merchantable of ores, minerals, metals and metallic products, supplies of water, merchants and manufacturers and

The Dominion Gold Company,

and its objects.

workers of any minerals, metals, articles and things used in or in connection with mining, milling, smelting and other processes aforesaid, or any of them."

The authorized capital is £170,000, in shares of £1 each, whereof it is stated £20,000 has been subscribed and paid up for working capital. The board is composed of Somerset F. Gough-Calthorpe, chairman, Edmund A. Robinson and Hon. Mountstuart W. Elphinstone, and among the other shareholders are Lord Elphinstone, Alexander M. Hay, James E. Hope, G. Dunlop and Hon. Edward B. Elphinstone. F. W. Croucher, of London, is secretary of the company, and Robert H. Ahn, of Rat Portage, is resident manager.

Properties of the company.

The company was incorporated 23rd August, 1895, and immediately afterwards it acquired by purchase the properties of the Gold Hill and Black Jack mining companies, which were sold by order of the court. The locations acquired comprise 70K, 76K, 175P, 190P, 191P, 193P, 194P and 282P of the old Gold Hill Company; 90X, 192P and 111 in the locality of the Black Jack Company; and in addition a location on Yellow Girl bay known as the Homestake, Sultana Junior opposite Sultana island, a third interest in the Queen of Sheba location on Ptarmigan bay, and 101K in Jaffray township, all of which had been held by the Black Jack Company; besides the Elphinstone property on Shoal lake Narrows, and the Rat Portage Reduction Works.

Operations on location 70K.

At the date of my visit work was carried on chiefly upon location 70K, where the Northern Gold Company had erected a mill and done some mining work in 1893. Three shafts were being sunk on what is known as the Pebble vein, which lies in a formation of hornblende schist with a north and south strike, and cuts it in a course 70° east of north. The first and third shafts are on the crown of nearly parallel ridges of schist, about 220 yards distant from each other, and the second is on the slope of the western ridge. Between the second and third is a narrow muskeg valley, which is crossed by a tramway constructed by the Northern Company to convey ore from an open cut commenced near No. 2 shaft. No. 1 shaft is close to the northwest corner of the location, and the vein is traceable beyond it down into low ground on the Black Jack location. This shaft is 6 by 9 feet, and is being sunk with the object of affording ventilation for No. 2, which is distant from it 325 feet. The vein is well exposed by cross cuttings for this length, and No. 2 shaft, 6 by 9 feet, has been sunk to a depth of 66 feet. At the bottom a drift has been commenced, extending east 8 feet and west 14 feet. At the top of the shaft the quartz is nearly the full width of the vein, and while it narrows downward it shows a well defined foot wall, dipping south 75°. At the end of the west drift the width was 3 feet, and at the end of the east drift it was only 15 inches. The air in this shaft was impure, but means were being taken to supply fresh air through a tube of 6 inches diameter, the lower section of which was of canvas with wire coils inserted to keep it distended—to be drawn out of the way whenever blasts are fired. Through this tube fresh air will be forced down by a fan. This arrangement however is only temporary, for when No. 1 shaft is sunk to a depth of 100 feet and the intervening section of the vein is stoped out, good ventilation will doubtless be secured. A derrick was in course of erection over No. 2 shaft for hoisting purposes. No.

3 shaft is 336 feet east of No. 2, and was sunk to a depth of 22 feet. The size was 7 feet 4 inches by 11 feet, but as this is intended to be the main working shaft as soon as a drift has been extended from No. 2 to No. 3, the contract calls for a size of 11 by 13 feet. The dip is 76° south, or nearly the same as at No. 2. Work has also been commenced upon a small vein called the Jewel, south of the mill, where it crops out upon the east shore of Islet lake. An open cut has been made on the vein for a length of 20 feet, and to a depth of 15 feet at the eastern end. The vein is only a few inches wide at the surface, but at 10 feet it measures 12 to 15 inches; and, like the Pebble, its dip is towards the south. It is said to yield rich ore, and a panning from the dirt at the dump showed gold colors.

The gold mill.

The mill erected by the Northern Gold Company was in course of reconstruction, and some of the old plant was being torn out. The old company had re-equipped it in 1893 as a Colorado mill with two batteries of five stamps each, having a drop of 18 inches. It was also supplied with a Forrester ore breaker, a pair of Cook amalgamators, and a boiler and engine of 45 h. p. The new company proposes to retain the Colorado mill, and to add two Perfection concentrating tables from the Colorado Iron Works of Denver. Two Tulloch feeders are also to be provided for the batteries, and the Cook amalgamators will be retained to treat the tailings after they have passed over the concentrators. It is also intended to supply a boiler and two engines to work the hoisting drums between the No. 2 and No. 3 shafts.

The machinery

A diamond drill has been purchased from the American Rock Drill Company, to be used in exploration work, and an electric plant will be placed in one of the buildings of the Black Jack property to supply light for the shafts and mill.

and buildings.

The buildings of the Gold Hill location consist of the mill, office, dining camp, four sleeping camps, dry room, forge and stable. On the Black Jack are a shaft house, mill, engine and boiler house (which will be supplied with a hoisting engine and electric plant), a large boarding house and dining camp. The main shaft on this location is said to be 80 feet deep, but it was full of water. At the time of my visit in 1893 (17th August), it had reached a depth of 63 feet. Several other openings have been made, including a shaft on what is known as the Bull Dog—a strong vein showing good ore.

The following entry made in the Inspector's Book under date of August 9th supplies fuller particulars of the mines and works:

Entry in Inspector's Book.

"To-day I visited the properties of the Dominion Gold Mining and Reduction Company of London, Eng., known as the Gold Hill and Black Jack mines, southeast of Big Stone bay in Lake of the Woods.

"Mr. R. H. Ahn is in charge as superintendent, and Joseph Hicks as mining captain

"The properties of the company consist of locations 70K, 76K, 175P, 190P, 191P, 193P, 194P and 282P of the Gold Hill, and 90X, 192P and 111 of the Black Jack, besides locations in other parts of Lake of the Woods region. A dock has been built on Brydges bay where boats land,

and a good road has been cut out up to the Black Jack mine, by which access is now gained to the locations from the lake instead of over the old road from the head of Moore bay.

"Work at present is carried on chiefly upon location 70K, where the former owners, the Northern Gold Company, had erected a stamp mill and done some mining work.

"Mining operations are confined to a vein known as the Pebble, which cuts the formation in a course 70° east of north, the strike of the formation being nearly north and south.

"Three shafts are in course of being sunk, the first and third on nearly parallel ridges about 220 yards distant from each other, and the second upon the eastern slope of the west ridge. Between the second and third shafts is a narrow muskeg valley, crossed by a tramway for conveying ore.

Extent of the workings.

"No 1 shaft is near the northwest corner of the location, and is intended to provide ventilation for No. 2. It is 6 by 9 feet, 14 feet deep, and is timbered to solid rock.

"No. 2 shaft is 325 feet east of No. 1. It is 6 by 9 feet, timbered to solid formation, and sunk to a depth of 66 feet. At the bottom drifting has been commenced each way along the vein, the length west being 14 feet and east 8 feet. At the top of the shaft quartz is nearly the full width of the vein; at the west end of the drift it is 3 feet wide, and at the east end about 15 inches. The foot wall is well defined, and dips towards the south at an angle of 75°. The air at the bottom of the shaft is impure, and it is proposed to supply fresh air by means of a fan until ventilation is obtained by connection with the No. 1 shaft. A derrick is in course of erection over the shaft for hoisting purposes.

"No. 3 shaft is 336 feet east of No. 2. Its depth is 22 feet, and the present size 7 by 11 feet, the dip being south at an angle of 76°. There is a showing of quartz four inches wide on the foot wall. This is intended to be the main working shaft of the Pebble vein when the level is driven from No. 2 to No. 3 shaft.

"The work of sinking these shafts is carried on by contract.

"Work has also been commenced upon a small vein south of the mill, on the east shore of Islet lake, and known as the Jewel vein. An open cut has been made on the vein for a length of 20 feet, the depth of which at the eastern end is 15 feet. The outcropping of quartz at the surface is only a few inches wide, but at 10 feet depth it increases to 12 inches, with a dip to the south. Pannings made from dirt of the dump heap give good showings of free gold.

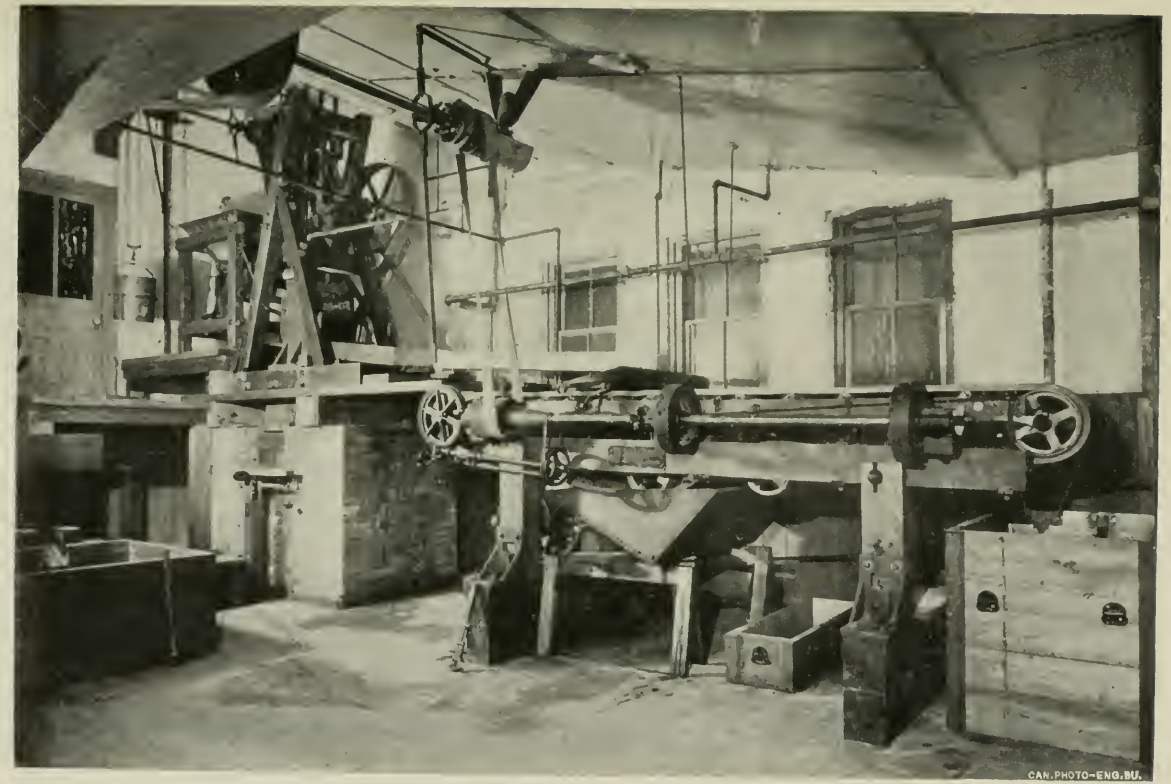
"In the northern part of the location a number of pits and one shaft were sunk by the former owners, but their depth has not been measured.

Outfit of the mill.

"The mill is in course of reconstruction. There are two batteries of five stamps each, with a drop of 18 inches, a Forrester ore breaker, a pair of Cook amalgamators, and a boiler and engine of 45 h. p. The company is adding two Tulloch feeders to the batteries, and two Improved Perfection concentrating tables made by the Colorado Iron Works of Denver, their purpose being to complete the mill as far as practicable on the Colorado pattern.

Rat Portage Reduction Works, west side, p. 187.

Rat Portage Reduction Works, north side, p. 187.



Stamp Mill, School of Practical Science, Toronto, p. 212.

"The other buildings on the Gold Hill location are dining camp, four sleeping camps, dressing room, office, blacksmith's shop and stable; and on the Black Jack location shaft house, engine and boiler house, and dining and sleeping camps.

"A shaft was sunk on the Black Jack location by the former owners to a depth, it is stated by the superintendent, of 80 feet; but it is at present nearly filled with water. Several other openings were also made, but none are in a condition to be examined.

"It is directed that the mouth of every shaft and pit not now in use upon both properties shall be securely fenced, as required by Rule 6 of the General Rules of The Mines Act 1892 (section 74), and also that the attention of contractors be called to the provision of section 9 of the Act relating to Mines and Mining, statutes of 1894. Directions.

"Two copies of the mining laws of the Province are presented herewith, one for the superintendent of the works and one for the mine captain; and special attention is called to the provisions of Part IV of the Act of 1892 (sections 53 to 76 inclusive), and to section 9 of the Act of 1894.

"Fifty men are employed by the company, of whom thirty are miners working by day and night shifts of ten hours. The others are laborers, carpenters and machinists." Employés.

Location 208P, which adjoins 70K on the north, has been prospected by Mr. Ahn under an option from the owners since my visit to the locality, and the showings are reported to be so satisfactory that it is likely to be taken over and worked in the spring. A new prospect.

Instead of returning to the dock at Brydges bay in the evening we walked through the Black Jack, 90X, north to the old Winnipeg Consolidated mine, on the southeast shore of Big Stone bay, where we got on board the boat and returned to Rat Portage late in the evening

THE SULTANA MINE.

Tuesday and Wednesday were spent at the Sultana gold mine, the first day in the company of Dr. Dawson. Very gratifying progress has been made on this property since my former visit in 1893; a large body of ore has been exposed by shaft, winze and drifts, and the mill is a steady gold producer. The following entry in the Inspector's book under date of September 11 gives details of the mine and works: Progress of operations at the Sultana mine.

"I have to-day visited the Sultana mine on behalf of the Inspector, and have carefully examined the condition of the mill and underground workings as regards the health and safety of employés. Entry in the Inspector's book.

"The plant of the mill is the same as at the previous inspection. The ore crusher is undergoing repairs, but all other machinery, including batteries, vanners, power and electric engines, steam pumps, etc., are in use, in good condition, and as far as I can observe are satisfactorily guarded at every point to prevent the occurrence of accident to the workmen. Plant of the mill

"In the shaft house are a steam boiler of 45 h. p., a Rand air compressor of 12 by 18 inches which drives three Little Giant drills in the mine, and a and shaft house.

hoisting engine of 15 h. p., all in good running order, and with their parts properly safe-guarded. The room is neat and clean.

The working shaft.

"The working shaft of the mine is situated a few feet south of the shaft house, and separate from it. The openings to the skip-road and man-road are enclosed with substantial iron pipe railing, with movable gates, and a board partition separates the two roads down to a point nearly midway between the second and third levels, with timber cross-pieces at intervals securely set and ironed into the foot and hanging walls.

"In the man-road are twelve platforms or landings between the top and bottom of the shaft, the distance between each being about fifteen feet, and the ladders are constructed of good material, well put together, and fastened firmly in place.

"The skip-road is built with double timbers resting upon the foot wall, on which the ore skips ascend and descend, being hoisted and lowered by wire rope attached to the drum of the hoisting engine and passing over a grooved wheel supported by a derrick that surmounts the shaft. The skips are run according to the usual signals, a copy of which is posted in the shaft house for the instruction of engine-men and miners. Heavy trap doors are placed in the skip-road at the several levels, which are opened or closed as occasion requires, but the shaft is not otherwise guarded at the levels. Three skips constructed of strong iron plate are in use at present for lifting ore. They are used also in bringing up and sending down the drills of the miners.

"The shaft has a depth of 200 feet, and its size throughout (including the man-road and skip-road), is 7 by 18 feet. Three levels have been driven from it on the vein, the first at a depth of 66 feet, the second at 126 feet, and the third at 190 feet from the surface. At the bottom is a sump of 12 feet in depth, out of which the collected waters of the mine are lifted by a pump to the surface.

No. 1 level.

"No. 1 level is driven north from the shaft 72 feet, and south 90 feet, and from the end of the latter is a cross-cut of 40 feet to connect with the bottom of the shaft on No. 2 vein, now idle. Overhead stoping has been done on the south section of this level to a height of 25 feet, the width ranging from 6 to 8 feet according to the width of the vein.

No. 2 level.

"No. 2 level is driven north 82 feet, from the farther end of which there is a winze opening up to the first level. To the south it is driven 137 feet, and at 72 feet from the shaft is a winze which connects with the first and third levels. Overhead the ore has been stoped out almost wholly to the first level, and the roof and walls secured by timbering. Underfoot stoping has been carried on beyond the winze for 30 feet to a depth of 25 feet, and the vein has been opened to a width of 30 feet without reaching the hanging wall. It will be necessary to timber this part of the workings at an early date to prevent the falling or sliding of rock from either wall.

No. 3 level.

"No. 3 level is driven south 100 feet, but it is being used only as a roadway for the ore taken out of the No. 2 workings and dropped through the winze connecting the two levels.

"Tram roads are laid down on each of the three levels, along which the ore skips are conveyed upon cars to and from the skip-road, and the ventilation and drainage of the mine appear to be ample and satisfactory.

"Near the southern side of the location work is carried on upon a fissure vein known as the Crown Reef. From the west slope near the lake an open cutting has been made for a length of 200 feet on the surface, following an irregular east course, and of 150 feet on the floor. The depth of the cutting at the end of the floor is 62 feet from the surface, measured on the dip of the vein, which is about 70° north. The average width is about five feet. Crown Reef vein.

"Work is also going on upon a vein which crosses the northwest headland of the location, where an adit is being driven south at the lake level.

"A dressing room for the men has been built to the south of the shaft house and convenient to it, warmed with steam pipes, and provided with necessary supplies of wash basins, soap and towels. Dressing room.

"The number of men employed at the mine and mill is 40, including 25 miners, 4 trammers, 3 blacksmiths, 2 engineers and 2 firemen, and work is carried on by day and night shifts of ten hours each. Employés.

"The mining captain is Albert Johnson, but the general management is directed by the owner of the mine and works, Mr. John F. Caldwell. Management.

"In addition to the instruction already given for securely timbering the walls between the second and third levels, it is directed that the entrances to the shaft at the several levels shall be guarded in the same manner as at the surface of the shaft, as required by the provision of Rule 7 of section 74 The Mines Act 1892. It is directed further that a ladder way or man-road be constructed from the mouth of the shaft on No. 2 vein down to the cross-cut connecting with the first level of No. 3 vein and carried downward to each of the lower levels as the progress of mining operations shall permit and require, as an additional means of escape for the miners in case of an outbreak of fire, or the inflow of water, or of danger to life from any other cause. Directions.

"The attention of the owner of the mine and of the mine captain is drawn to the provision of section 9 of the Amended Act relating to Mines and Mining (chapter 16, Statutes of 1894) as regards the responsibility of contractors, in case any part of the work in or about the mine is now or hereafter carried on under the contract system. Responsibility of contractors.

"Copies of the Mines Act 1892, bound up with which is the amending Act of 1894, are enclosed herewith for the owner and captain of the mine and works, and their attention is specially directed to the provisions of Part IV. of the former Act which relate to Mining Regulations, embracing sections 53 to 76 inclusive, as well as to section 9 of the latter Act."

The dining camp is cleanly and well ordered, and the table is bounteously furnished with nourishing food. Mr. Caldwell not only treats his men well, but he maintains good discipline among them and no labor trouble has arisen.

At the end of the year it was learned that the shaft had been sunk to a depth of 250 feet, and that saving the loss of a few days caused by a fire in the month of March the mine and mill had been worked steadily throughout the year. The large ore lens south of the main shaft, between the second and Progress of the mine at the end of the year.

third levels, was so easily attacked that a few miners could keep up the supply for the mill, while others were employed opening up new ground by sinking the shaft and driving levels.

THE REGINA MINE.

Location of the Regina.

The Regina gold mine is one of the most recent of the mining adventures of Lake of the Woods. It is situated on one of the numerous arms of the lake, upon its eastern side, east of the Grand Presqu'ile and Whitefish bay, about 30 miles due south of Hawk Lake station on the C. P. R. and 20 miles east of the meridian of Rat Portage; and while in a straight line the distance from the latter place is only 36 miles, it is not less than 45 miles by the water route. A winter road, partly over land and partly on ice, is about 38 miles.

The manager of the Regina Gold Company, Mr. William G. Motley, M.E., came up to Rat Portage on Wednesday evening with the company's steam

Map showing locations of Regina Gold Mine.

launch Eleanor, and offered me a passage when he would return to the mine next day. It was 3.15 Thursday afternoon before he got ready to start, and in addition to a deckload of supplies the little craft had a boat in tow well laden with lumber and other articles required for the mine. There were seven passengers besides Mr. Motley and two of a crew, three of whom were miners going out to work at the Regina, and two were prospectors going to do a little exploration work upon a property on Yellow Girl bay. A smart wind was blowing, and a friend took me aside to whisper the counsel—"I wouldn't venture the trip in a little thing like that, loaded down to the rail. But can you swim?" It did look like a risk, and one is never sure of the wind on Lake of the Woods; but an insurance agent was one of the party, I took the risk, and we set off. The lake outside the Devil's gap was only a little lumpy, and as the wind slackened the water was soon in condition for

fast time. Unluckily however the packing in the cylinder of the engine became loose, and there were neither tools nor materials at hand to repair the damage, so that the rest of the voyage was slow and it was made disagreeable by the escaping steam.

For eight miles after leaving the Devil's gap the course is nearly due south, between Scotty and Middle islands, and through the French Narrows between Allie island and the eastern peninsula, where there is a solitary settler. Thence it is southeast, passing between Ferrier and Shore islands, through Red Cliff bay and past Yellow Girl point[41] into Yellow Girl bay, the western side of which is lined with islands. It was growing dark in this bay, and about midway down it a signal whistle was sounded and two Indians paddled over from their camp upon a small island for the two prospectors. Presently another whistle was heard, and in the darkness another boat was seen threading its way between the islands to meet us, on board of which was Mr. Ahn and a party of prospectors who were out on a tour of exploration. Brief courtesies were exchanged, as they do at sea, and the course was continued. On the southern side of Yellow Girl bay, between two long and narrow points of land, is the mouth of Long bay, a sheet of water varying from an eighth of a mile to a mile wide and 10 or 12 miles long, upon the north shore of Long point. Three miles from the mouth we rounded Rendezvous point and entered what is known as The Passage, a narrow channel with finely wooded banks through which entrance is made into Whitefish bay. The Passage is about a mile long, and it looked very pretty in the darkness. But neither here nor anywhere else on the tortuous course across the bay with its scores of rocks and islets did the man at the wheel seem to have any misgiving; he steered his way as if guided by the instinct of a bird, for to the ordinary eye no object could be seen a dozen yards ahead. Whitefish bay is one of the largest of the numerous bays of Lake of the Woods, and as I saw it returning in the afternoon of next day I think it is altogether the most beautiful. It lies between the ragged mainland and Grande Presqu'ile and has a length of about 12 miles from northwest to southeast, with a breadth of 3 to 5 miles. The water is wholly unlike the rest of Lake of the Woods, being very clear and blue. The reason of this no doubt is that Whitefish bay receives the waters of Crow lake, lying to the east of it—a lake having an area of 100 square miles, 800 feet deep, and in clearness as transparent almost as the air above it. Following close to the southwest shore of Long Point island for 7 or 8 miles we passed out of Whitefish bay through the Sioux Narrows and entered Regina bay; and four miles farther on, nearly due east and upon the south shore of the bay, are the locations of the Regina Mining Company. We reached the floating dock at the camp at 10 o'clock, having taken 6¾ hours for the trip; the usual running time of the Eleanor, I was told, is 5½ hours.

The route to the location.

Whitefish bay.

[41] Dr. Bigsby, who went over this route in 1823 into Whitefish lake as he calls it, refers to an island of the same name which is described as "small, woody and rather high," and he adds: "It takes its name from a young girl in a yellow dress having been seen standing on one of the cliffs. She disappeared on being searched for." Vol. II., p. 310. This island is not clearly identified on Bigsby's map, but is one of a group of small islands situated south of the headland now called Yellow Girl point; it is not named on the modern maps.

The Regina Mining Company.

The Regina Mining Company has been reorganized out of the Rajah Gold Mining Company of London, Eng., which in 1893 had done exploration work on location 317P, five miles northeast of Rat Portage.[42] Mr. Pascoe, a mining expert of large experience, was sent out in the summer of 1893 to examine the property, and he made an unfavorable report upon it. In the following year Mr. Motley also condemned it, after which he was instructed to report upon other properties in the district. He spent several weeks visiting various locations, and finally made choice of those on what is now named Regina bay, as being in his opinion the most promising at that time in the market. There were two locations, 566P, 35 acres, and 567P, 42 acres, which had been taken up by Messrs. Paul Proulx, Jacob Henesy and John McLean, and these were purchased in the fall of 1894 at a price variously reported at $10,000 to $14,000. A little work was done that year; a house was built for the employés, and a small clearing was made, but actual mining was not undertaken until the spring of the following year. In May and June materials were collected for the mill, and on 1st July the work of construction was commenced under the charge of Mr. Otto F. Purnall, whose services were placed at the disposal of the Regina Company by the Gates Iron Company of Chicago, who obtained the contract to supply the batteries. On 5th September the mill was completed and the machinery set in motion. The entry made in the Inspector's book under date of September 13 furnishes all necessary particulars of the mine and works:

Exploration work.

Entry in the Inspector's book.

"I have to-day examined the mine and mill of the Regina Gold Mine (Limited), on behalf of the Inspector of Mines.

The Company

"This is a company organized under an English charter, with the head office in England, and represented by W. G. Motley, M.E., as resident manager. William Caldwell is employed as mine captain.

and its property.

"The property of the company is situated on Whitefish bay,[43] in Lake of the Woods, and consists of locations 566P, 35 acres, and 567P, 42 acres.

"Upon the water front the formation is granite, backed at some distance from the shore with a formation of schistose rock. On location 566P there are three fissure veins in the granite, which extend into the schist, and one bedded vein in the schist, all of which are claimed to carry gold.

Prospecting and mining operations.

"Prospecting work has been done upon each of those veins, but only upon No. 3 has work been carried on to any considerable extent. This vein is near the eastern boundary of the location, and it extends into 567P, having a course of nearly southeast and northwest for a distance of 200 feet from the lake. At this point it enters the schist and turns to an east and west course for 250 feet, and again resumes the northeast and southwest course. A shaft has been sunk upon it to a depth of 50 feet, neatly and substantially timbered to a depth of 20 feet. The average width of the vein is 2 feet 6 inches, and although irregular it is enclosed by good walls. The dip is 75° towards the west. The size of the shaft inside the timber is 6 by 10 feet,

[42] The Rajah had a capital of £170,000; the Regina's capital is £130,000. Its president is Lieut.-General H. C. Wilkinson, of London, Eng.

[43] This is the usual description of the locality, but in reality it is on Regina bay, which is connected with Whitefish bay by the Sioux Narrows.

whereof 6 by 6 feet is a skip way, and 4 by 6 feet a man-way, separated by a board partition to 30 feet. The entrance to each opening is protected by trap doors, but without fence or railing as required by No. 7 of the General Rules, section 74, The Mines Act 1892. A ladder inclined at the most convenient angle, and with platforms at intervals of 15 feet, has been constructed for the man-way, and is securely fixed in place.

"A tunnel or adit has been driven upon the vein to a length of 77 feet measured from the mouth of the shaft, and at 70 feet a winze has been sunk 10 feet below the floor. The width of this vein at the shaft's mouth and for a length of 35 feet on the floor of the adit is 8 feet, at which point it appears to be split; at 50 feet the main vein is 4 feet wide at the floor, and at the top of the slope, 26 feet above the floor, it is 2 feet 8 inches. Along the adit and to the bottom of the shaft the walls, although irregular, are clearly defined and show a dip of about 75° west.

"It is estimated that 300 tons of ore are lying on the dump for milling, the product of mining operations in the months of May and June. At the end of the latter month mining was suspended in order that work of mill construction might not be hindered.

"The buildings consist of the mill, shaft house (which is connected with the mill by an enclosed gallery), dining camp, office, blacksmith's shop, and magazine. The men at present occupy tents for sleeping, but a log house for their better accommodation is in course of erection. A dock has been constructed convenient to the mill, and alongside it the depth of water is 15 feet. Buildings

"The mill is a well built frame structure, and is equipped with an engine and boiler of 40 h. p., a grizzly and a No. 7 Blake ore crusher, an ore bin of 50 tons capacity underneath the crusher, two Gates' batteries of five stamps each, the stamps of 900 pound weight and dropping 8 inches at a speed of 80 per minute to crush the ore, which is delivered by two automatic Tulloch feeders, front and back plates, 45 mesh screens, and outside plates of 4½ by 10 feet to take up free gold, two Perfection concentrators, with amalgamated bottoms, manufactured by the Colorado Iron Works, four slime cloths each 2½ by 16 feet, air compressor No. 2 of the Canadian Rand Drill Co's manufacture, and an air receiver of 3 by 6 feet to supply power for drills, a dynamo of 100 lights capacity driven by an engine of 10 h. p, and a water tank of 2,200 gallons capacity on the third floor to supply the batteries, and with water plugs on each of the three floors of the mill for connection with hose for fire protection. The shaft house is provided with a steam hoist and wire cable, and iron tramways are laid down from the mouth of the shaft and from the adit, with turn table to the ore and rock dumps outside, and to the grizzly in the mill. A proper system of signalling, with printed instructions, directs the operations of the hoist. and plant.

"Construction work upon the mill was commenced on 1st July, and the first run of the stamps upon ore was made on 5th September.

"Thirty-five men are employed at the works, of whom 18 are miners working in two shifts per day of ten hours each, 4 engineers, 4 mill men, 3 surface men, 2 blacksmiths, 2 cooks, 1 foreman and 1 clerk. Employés.

Directions.

"All fly wheels and other dangerous parts of the machinery of the mill are safely guarded by railing, but for greater security it is directed that a rail be placed alongside the carpenter's platform upon the right hand, and also at the ascent of the stairway on the second floor. It is furthermore necessary that the entrances to the skip-way and man-way of the shaft be protected by railing, as required by No. 7 of the General Rules of The Mines Act 1892, section 74. A dressing room for the miners should also be provided, as required by Rule 17.

"Two copies of the mining laws of the Province are presented herewith, one for the resident manager and one for the mine captain, whose special attention is directed to the provisions of Part IV. of The Mines Act 1892 (sections 53 to 76 inclusive), under the head of Mining Regulations, and to section 9 of the amending Act of 1894 which relates to the responsibility of contractors. The Regulations affixed to the outside cover of this Book, which have been made by Order in Council, printed in the Ontario Gazette and approved by the Legislature, have the full force and effect of law as provided by section 6 of The Mines Act 1892."[44]

Samples of rock from the location were selected, which have been submitted to Dr. Coleman for identification. Thin sections were made by him of the three different varieties, and he has given me a report on them.

The country rock.

The sample from the granitic rock along the shore of the bay Dr. Coleman describes as "a medium grained, flesh-colored, somewhat schistose rock, probably a crushed or sheared plagioclase granite. Under the microscope it presents a characteristic cataclase or crushed structure, especially in the quartz grains, which often have a mosaic rim of broken particles. The felspar is greatly decomposed, but seems to be plagioclase where fresh enough to determine. Much of it has been turned into colorless muscovite in crumpled leaves, which suggests a potash felspar. Some cubes of pyrite occur in it."

The green colored rock forming the extensive area of country rock south of the altered granite is described as "a hard gray green, very fine grained rock, probably schistose but possibly massive. Under the microscope one finds chiefly chlorite, some carbonate (probably dolomite), magnetite and a little quartz. The rock may be called a chlorite schist, but is probably a greatly metamorphosed basic eruptive, or a basic volcanic ash."

On the high ridge southwest of the mill and near the line of contact there are evidences of considerable disturbance, and greenish and light colored rocks are confusedly mixed to form a band or dike several feet wide in the granite. A sample taken from this band Dr. Coleman describes as "medium grained, yellowish flesh colored and massive looking. It contains pyrite, which has weathered to yellow brown limonite. Under the microscope it is seen to consist almost wholly of quartz, with tolerably fresh felspar (orthoclase, microcline and plagioclase) beautifully intergrown, forming

[44] Late in the year fire broke out at the mill which resulted in the destruction of the shaft house; but the system of fire protection provided for enabled the employés to confine the flames to that portion of the buildings, and beyond the loss of it Mr. Motley reports that no great damage was done.

the pegmatitic or granophyre structure. It may be called granophyre, or graphic granite, and is probably a dike rock."

A fine view across Regina bay is presented from the mine, looking north and northeast. Numerous small islands dot the water, and about two miles to the northeast, at the eastern end of Long Point island, may be seen the buildings of a Hudson's Bay Co. post. Through a strait four miles to the east come the clear waters of Crow lake, Sturgeon lake, Rowan lake, Black Bass lake and many others in the pine woods eastward of Whitefish bay. Across Regina bay.

Friday afternoon at 2 o'clock we left the Regina mine for Rat Portage. The cylinder of the Eleanor had been repaired in the interval, and with a light load she made a quick passage. A strong wind arose towards evening, and in crossing the traverses of Lake of the Woods north of Allie and Scotty islands the waves frequently broke over the bulwarks of the little craft, threatening to swamp it. The pump was kept steadily working, although it was not capable of doing more than half duty; but the numerous islands broke the force of the waves and we got through safely, reaching Rat Portage at 7 30 o'clock. It is surprising how venturous in a short time mining men grow on Lake of the Woods, knowing how suddenly wind gusts arise upon it and how quickly its shallow waters are lashed into fury; yet accidents are of rare occurrence, as boats are usually able to get into the shelter of a friendly island. Back to Rat Portage again.

LOCATIONS IN JAFFRAY TOWNSHIP.

The township of Jaffray lies to the east and northeast of Rat Portage, and was surveyed into lots in 1894. Previous to that time a number of mining locations had been surveyed and taken up within the boundaries of this township, and during the past two years some new discoveries have been made which may prove to be valuable when they have been properly opened up. Hitherto exploration in the district has been carried on almost wholly along the shores of canoeable waters, for excepting in pine belts the forests are so dense as to suggest a tropical jungle. Where surveys have been made however, or fires have broken out, or timber has been cut for any purpose, there is a chance of looking for mineral-bearing veins with some hope of discovery, and in Jaffray township prospectors have been rewarded with gold finds at a number of points in the interior and away from the water routes. Difficulties of inland exploration.

The south half of lot 15 in the fifth concession was under option last summer to Messrs. Hay and Ahn, and some prospecting work was done upon it. The formation is green schist, with a strike of northeast and southwest. A bedded vein with a dip of 70° north has been explored for a length of 125 yards, and at the eastern end it has been exposed by a trench and cross-cutting for a length of 15 yards. A shaft of 8 by 12 feet has been commenced here which has been sunk to a depth of 15 feet. The vein matter is banded quartz and schist, and pannings made by Mr. Ahn showed many colors of fine gold. However, it is never safe to count on the value of these ores by colors of gold, as owing to the fineness of the grains the actual yield may prove to be disappointing. A mill test is required to show their actual value. A comfortable log building has been put up on the lot for housing the miners employed in the exploration work. The lessees from the Crown are Messrs. Alfred Goulet, Albert Goulet and G. A. Kobold. Lot 15 in the fifth concession.

The Scramble mine.

In July of last year a discovery of gold was made on lots 13 and 14 in the sixth concession, and applications were made for portions of both lots by prospectors Henry Benson and Andrew Norman. An option on the locations was given to S. V. Halstead of Chatham, and prospecting work was undertaken to show the extent and quality of the mineral-bearing veins. When I visited the property on 19th September (which is known as the Scramble mine) a shaft of 6 by 8 feet was in course of being sunk on a large bedded vein close to the line between the two lots, which had at that time reached a depth of 14 feet. The formation is green schist, with a strike of northeast and southwest, and the Laurentian rocks lie close to it on the east side. The vein consists of banded quartz and schist, carrying very considerable quantities of iron and copper pyrites, has a width from wall to wall at the shaft of 28 feet, and dips to the northwest at an angle of 72°. Free gold was observed at several points in the shaft, and pannings of the ore showed a tail of gold in almost every instance. Mr. Halstead disposed of a large portion of his interest in the property to Mr. L. W. Partridge of Detroit, by whom prospecting work was carried on to the end of the year. The shaft has been sunk to a depth of 54 feet, and a cross-cutting at that depth showed the vein to have a width of 27 feet from wall to wall. Mr. Partridge has since secured the title to four locations of forty acres each on the two lots, and he reports that mill tests of the ore made at the sampling works of Ricketts and Banks in New Jersey, and elsewhere, have given very satisfactory results. A log house has been built on the property for the accommodation of the employés.

Prospecting work and mill tests.

GOLD MOUNTAIN MINE.

Numerous locations have been taken up on the west side of Lake of the Woods, but the only one upon which work was carried on last year is what is known as Gold Mountain mine. It is situated on the Western peninsula, about twenty miles southwest of Rat Portage, and not far from the line of steamboat travel to the mouth of Rainy river. I left Rat Portage on Friday morning, September 20, by the steam tug Queen, and made the run in a little over two hours. It was a delightful day, with a clear sky and balmy air, and the many islands and headlands passed on the way were resplendent in the riches of their autumn foliage. Taking the usual course out of Rat Portage through the Devil's gap, we steered to the southwest, by Aylmer point, Thomson's island and Wolf point on the right, and Manitou and Whiskey island on the left, and through Crow Rock channel between Crow Rock island and the peninsula, into Wiley bay. The pilot supposed the mine to be near this sheet of water, and the whole coast line was skirted to discover a landing place, but in vain. Turning at Wiley point on the south side of the bay, two canoe loads of prospectors were met who gave us directions. Two miles farther on, upon a headland of chlorite schist, the dock was reached and the tug tied up. A road leads two miles inland through the woods to the Gold Mountain mine, on location 48P, the patent for which was acquired five years ago by E. V. Wright of Ottawa. It lies between two small lakes, one upon the south and the other upon the north side, which occupy depressions about a hundred feet below the table land. The lake upon the south is

Gold Mountain mine, on the Western peninsula.

Location 48 P.

named Lily lake, from the many lilies which grow in its shallow water, and near to it a neat boarding camp has been built. The formation is a greenish gray schist, having a strike of northeast and southwest, and standing apparently on edge, but in the shaft that has been sunk on the location there is said to be a very slight dip westward. A banded vein of quartz and schist is exposed on the steep bank of Lily lake and has been traced across the location near to the lake upon the northern side, a length of nearly 1,500 feet. The foot wall is clearly defined for some distance north of Lily lake, and measurements show the width of the vein to vary from 25 to 65 feet. A shaft has been commenced at a point about 400 feet from Lily lake, on the foot wall, which is said to have reached a depth of 30 feet; but work upon it had been discontinued a short time before my visit and it was filled with water to within 15 feet of the top. A mass of white quartz is exposed by this opening which carries large quantities of iron pyrites and a little copper pyrites, and I was informed that assays of thirteen samples made by Prof. Donald of Montreal (who had examined the property) gave an average of $12.72 per ton. A sample of the country rock taken from the foot wall is described by Dr. Coleman as "a pale green, very schistose and compact rock sprinkled with cubes of pyrite. It consists mainly of quartz in very minute grains and scales of muscovite or sericite, and may be called a sericite schist." The machinery on the ground consisted of a 24 h.p. upright boiler, two steam drills and an Ingersoll hoist. The principal owners are E. V. Wright of Ottawa and James Foley of Montreal, and M. P. Wright was in charge as manager. A number of men were employed getting out timber for necessary buildings.

The return was made along the west shore of the lake, through the channel on the west side of Treaty island and around Coney island upon the north—which affords one of the most charming bits of scenery on Lake of the Woods—and we arrived at Rat Portage at 8 in the evening.

THE RAT PORTAGE REDUCTION WORKS.

Reduction Works at Rat Portage.

I had made several visits to the Reduction Works at Rat Portage, which were in course of reconstruction, and I spent several hours in them on Saturday previous to leaving for the east. It has already been stated that these works are the property of the Dominion Gold Mining and Reduction Company, having been acquired with other properties of the Black Jack Mining Company under a sale by order of the court. The mill was built in 1890, and it has since experienced several changes of ownership and management as well as attempts at improvement, without however making a return of much value for the money and labor expended upon it. It was indeed a "ramshackle" concern from the first, and the $75,000 or $80,000 which it is said to have cost was for the most part wasted because the men who had the spending of the money were lacking in the skill which an enterprise of this kind calls for.

Renovation of the plant.

The new owners have commenced with a scheme of thorough renovation, and a capable and experienced man, Mr. O. F. Purnall, was put in charge of the improvements. The old plant for milling the ore, which consisted of two Stand ard pulverizers, has been replaced with four batteries of five stamps each, two of them from the works of Fraser & Chalmers, of Chicago, and

two from the works of Ribon & Marche, of Jersey City. The foundation for the batteries is built upon solid rock with stone and cement mortar, and heavy timbers of British Columbia pine. Each of the mortars rests upon battery blocks constructed of plank set upon end and spiked together, according to the most approved modern plan. The crushing plant consists of a Blake and a Lynn breaker, each with a capacity of 120 tons of ore per day. Four bins with a capacity of 25 tons each receive the ore from the breakers, and deliver it to the batteries through Tulloch feeders. The limit of the stamps however is only 50 tons per day, and in practice will probably not exceed 40 tons. After being washed out on the amalgamated plates, the pulped ore is carried over a series of concentrating tables, of which there are provided for the four batteries two Perfection concentrators, two Krupp vanners, three Frue vanners and three slime vanners; and provision is made for putting in slime tables of canvas to catch floating particles of gold should they be required. A four-hearth reverberatory furnace has been constructed for treating the concentrates, with grinders and amalgamators, the capacity of which will be ten tons per day.

These works have been fitted up with a view to treating ores mined upon the Company's locations at various points upon the lake, and also to do custom work for owners of other properties should the ore be supplied. Their situation on the lake and close to the line of the Canadian Pacific Railway is well suited for the delivery of ore, fuel, etc., while their proximity to the town's electric works suggests the possibility of electricity being used alike for driving power and in the treating processes.

Situation of the works.

The Return Journey.

We had been favored with very pleasant weather from the outset of the tour until now. In the six weeks since leaving Windsor on the Alberta we were delayed only half a day by rain or wind; and while we experienced a few days of intense heat, the temperature generally was moderate and agreeable. The air of those northern regions is very invigorating, and the out-of-doors life that one is obliged to lead who travels as I did conduces to hardiness and healthiness. But the regular equinoxial storm was now due, and at noon of Saturday, 21st September, it set in with a downpour of rain. The rain fell heavily the whole afternoon, until the train carried us out of Rat Portage at 18 o'clock in the evening; it continued to fall all night; it was coming down in torrents next morning when the train arrived at Port Arthur; and it kept on without cessation there all day, until nearly midnight, when the rain gave place to a strong gale of wind.

An equinoxial storm.

The prospect of a sail out to Silver Islet and to Black bay, which Crown Timber agent Munro had planned, did not look very promising; but by noon the wind had abated somewhat, and at 1.30 p.m. we started out on the staunch steam tug Georgina, Capt. Nicholas Marin. A steamer with two sailing vessels in tow was met near Thunder cape; the vessels had been disabled in the gale, and were going in to port for repairs. Outside of the cape a heavy sea was on, but the Georgina rode the waves splendidly, and brought us to Silver Islet dock in two hours. Next morning she continued east by Edward's island, where work had been done upon a silver mine in

A trip to Silver Islet and Black bay.

1892, and thence into Black bay, where I had an opportunity of seeing extensive beds of brown sandstone underlying a mass of trap overflow. Farther north, on the east shore of the bay, is a deposit of magnetic iron sand extending for half a mile or more along the beach. Like the deposit at Moisie on the river St. Lawrence, it contains a small percentage of titanium, and is probably unfit for use. Mixed with it also are minute grains of garnet, which look beautiful under the glass. We got back to Silver Islet harbor Tuesday night, and Wednesday forenoon Mr. James W. Cross (who is in charge there) showed us over the old workings on the islet and also the mill upon the mainland. Many interesting particulars of Silver Islet from beginning to close of that enterprise were given me by Mr. Cross and Capt. Marin, both of whom had been employed at the works from the commencement of operations, and I had hoped to make use of them in this Report in writing a narrative of the great mine; but failure to procure other materials necessary for the completion of that task has obliged me to defer it for a time. We reached Port Arthur early in the afternoon.

The Empress gold mine.

I had in view a visit to the newly discovered gold property of the McKellar Brothers near Jackfish bay on the journey eastward, but learned on returning to Port Arthur that prospecting operations had ceased there on the Saturday evening previous and that owing to the heavy storm, which had destroyed all the canoes and small boats on Jackfish bay, it would be exceedingly difficult to get to the locations. Mr. Peter McKellar of Fort William, who had just returned from the mine, gave me an account of the work which had been done in exploring the veins, and the following statement is given as supplemental to the report of Dr. Coleman, who visited the locations about the middle of August.

An interview with Peter McKellar.

Description of the locations.

"Locations 567, 568 and 569R have been surveyed within four miles of the Canadian Pacific Railway at Jackfish bay, as shown by the surveyor's sketch—R569 being the westerly, R568 the easterly and R567 the middle one of the three locations. The first discovery of gold was made upon the last named in June of this year, specimens from which were shown to my brother Donald by an Indian; and after testing the ore and examining the vein the Indian's rights were purchased. A further examination was undertaken by Donald and myself, and tests were made which resulted in further discoveries. A surveyor and five men were employed to lay out the three locations, but owing to the dense growth of timber, chiefly birch, it took two weeks to complete the work. All the timber there is green, no fire having touched it, and although the trees are not large they spread wide, a number growing from the same roots, and the work of running lines is very difficult in consequence. The first work of exploration was done on 567R, with a party of fourteen men. The country rock is Huronian, composed of green schists, but the selvage of the vein is a talcose schist varying in width from 30 to 60 feet. The quartz is sometimes enclosed in this schist and again runs on either side of it. It occurs in lenses, alternating with the slate or mixed with it; but at the western end, in 569R, the quartz is nearly solid. At first it was supposed to be a bedded vein, running with the formation, but later work leads to the belief that it is a fissure vein. Cross-cuts on the

Exploration work carried on.

middle vein show it to dip 45° south ; on the west location the dip is much steeper, being nearly vertical in places, ranging from 45° to 90°. The general course is about east-northeast and west-southwest, and we have traced it by cuttings for about a mile—across the whole of 567 and portions of 568 and 569. Six cross-cuts were made on 567, one of which was sunk in the middle to eight feet. At this point the vein is 35 feet wide, composed of quartz and slate and all of it carrying auriferous sulphurets, and free gold was obtained by washing. All the other cuttings proved a width of not less than 20 feet. On 568 two openings were made, showing a width of 20 feet of quartz and slate, carrying gold ; the eastern end on this location is covered with boulders and drift. On 569 three points were cross-cutted and several pits were sunk. Two of the cuttings showed 20 feet of quartz and only a little of slate. At eight chains from the line part of the vein is deflected towards the west-northwest, crossing the formation in a zig-zag line for at least 100 feet, and then continues nearly west until it is lost under the drift ; the other part of the vein continues along the line of bedding. Two pits have been sunk on 569, one of which is 20 and the other 25 feet wide and eight feet deep. Altogether about 200 tons of ore have been raised of good mill rock, and all the work was done from 26th August to 21st September. A mountain 600 feet above the level of lake Superior at two miles from the water's edge crosses the properties in a west-southwest and east-northeast direction, and the vein lies parallel with it for half a mile, near its crest on the middle location and 100 feet below on the western one. The land falls away in a succession of benches down into the valley at the north end of Jackfish lake or Inner bay, while between the latter and Jackfish bay is a ridge of granite about 500 feet high. A ton of ore has been taken out to the railway station for a mill test, the results of which will determine the next course to be taken. We are confident from the hundreds of tests made by pulverizing in a mortar and washing out the free gold that the yield will be satisfactory. The ore is well charged with iron and copper pyrites and galena, and even where the quartz seemed to be white it is found when broken to carry sulphurets. The total area of the three locations is 480 acres, and further prospecting is to be carried on."

Organizing a company.

As a result of the tests a company has been organized to work the properties under the title of the Empress Gold Mining Company, with a capital stock of $100,000, nearly all of which has been taken up at Port Arthur, Fort William and Rat Portage, and preparations are going forward to sink one or more shafts and to put up a ten-stamp mill.

To Toronto by rail.

Thursday morning, 26th September, I resumed the journey east by rail, reached Sudbury next morning and spent part of the day at the Canadian Copper Company's works. Saturday I visited the Bonanza Nickel Mining Company's gold mine near lake Wahnapitæ, where the diamond drill was prospecting a large vein under the management of Mr. Roche, of which an account is given elsewhere ; and being detained at the camp by a storm of rain and sleet, I did not arrive at Toronto until Wednesday evening, 2nd of October.

A. B.

SECTION IV.

THE NEW ONTARIO.[1]

Extent of the region,

The New Ontario is a title which in the common use describes all that part of the Province lying beyond the Mattawan and French rivers, and the Nipissing, Huron and Superior lakes, to the north and west boundaries. These boundaries, now clearly defined and established by an Inperial statute, were for nearly twenty years a subject of keenly waged dispute between the Governments of Ontario and the Dominion ; and at one time, after Manitoba had been projected into the quarrel, feeling ran so high that recourse to arms was imminent. The extent of country involved in this dispute, while very much larger, is perhaps not less valuable in its resources of timber and minerals than the region in dispute between Guiana and Venezuela, over which the two great Anglo-Saxon nations were just now talking of war. In one important particular, too, there is a close parallel in the conduct of the negotiations. The President of the United States has named Commissioners to determine what is the true divisional line between British Guiana and Venezuela ; and this work being done, he declares it will be "the duty of the United States to resist by every means in its power, as a wilful agression upon its rights and interests, the appropriation by Great Britain of any lands or the exercise of governmental jurisdiction over any territory which, after investigation, we have determined of right belong to Venezuela." The Government of Canada also, at an early stage in the negotiations with Ontario, and before any limits were proposed or discussed, appointed a commissioner and authorized him to proceed and trace out, survey and mark the boundaries on the west and north of the Province according to the specific and definite instructions given to him. The same arbitrariness appears in both cases ; but in the action of the Government of Canada in 1872 there was a tangible interest at stake, and in the action of the Government of the United States in 1896 there is nothing but a sentiment. Had the Government of Ontario tamely acquiesced in the instructions issued from Ottawa, instead of vigorously contesting their claim to the final award, it would have meant to this Province the loss of 100,000 square miles of territory.

and how its boundaries were settled

and defined by the Judicial Committee of the Privy Council.

The New Ontario lies within boundaries declared by the Imperial Parliament in 1889, in an Act passed in accordance with the terms of an address from the Senate and Commons of Canada presented to the Queen in that year. These boundaries are substantially the same as those agreed upon in 1878, in the award of the arbitrators appointed by the Dominion and Ontario Governments, but subsequently repudiated by the Dominion Government ; and, as far as they go, they are identical with the boundaries found by the Judicial Committee of the Privy Council in 1884. In the schedule to the Imperial Act they are described as follows :

"Commencing at the point where the international boundary between the United States of America and Canada strikes the western shores of Lake

[1] A paper read before the Hamilton Association, in the city of Hamilton, January 16th, 1896.

Superior, thence westerly along the said boundary to the northwest angle of the Lake of the Woods, thence along a line drawn due north until it strikes the middle line of the course of the river discharging the waters of the lake called lake Seul, or the Lonely lake, whether above or below its confluence with the stream flowing from the Lake of the Woods towards lake Winnipeg, and thence proceeding eastward from the point at which the before mentioned line strikes the middle line of the course of the river last aforesaid, along the middle line of the course of the same river (whether called by the name of English river or, as to the part below the confluence, by the name of the river Winnipeg) up to lake Seul, or the Lonely lake, and thence along the middle line of lake Seul or Lonely lake to the head of that lake, and thence by a straight line to the nearest point of the middle line of the waters of lake St. Joseph, and thence along that middle line until it reaches the foot or outlet of that lake, and thence along the middle line of the river by which the waters of lake St. Joseph discharge themselves to the shore of the part of Hudson bay commonly known as James bay, and thence southeasterly, following up the said shore to a point where a line drawn due north from the head of lake Temiscaming would strike it, and thence due south along the said line to the head of the said lake, and thence through the middle channel of the said lake into the Ottawa river, and thence descending along the middle of the main channel of the said river," etc. to a stone boundary on the north bank of lake St. Francis in the St. Lawrence river.

Eastern and western boundaries.

The eastern boundary of the Province was first determined in 1791 by the Imperial Order in Council establishing the Provinces of Upper and Lower Canada, including the section of it from the head of lake Temiscaming defined by "a line drawn due north until it strikes the boundary line of the Hudson bay." The exact starting point of this line was finally fixed in 1872, by agreement between the Governments of Ontario and Quebec, in 1873 and 1874 it was surveyed as far north as the height of land by joint commissioners appointed for the purpose, and in 1874 the line was ratified by the Legislatures of the two Provinces. As laid down on the maps, it starts from the parallel of 47° 33′ 48″ 37‴ and is as nearly as may be along the meridian of 79° 30′ west from Greenwich. The western boundary is the meridian of the Northwest Angle of Lake of the Woods, and the joint commissioners under the Treaty of Ghent ascertained this point to be in latitude 49° 23′ 55″ north and in longtitude 95° 14′ 38″ west from Greenwich.[2] The New Ontario therefore extends across 15° 44′ 38″ of longtitude, which on the latitude of 50° measures 701 statute miles.[3]

Length, breadth and area of the New Ontario.

The greatest breadth from north to south, measured from the mouth of the Spanish river in Georgian bay to the mouth of the Albany river in James bay (or say from 46° 15′ to 52° 30′ north latitude) is about 430 miles, and the least is along the western boundary, where it is only about 80 miles. From the mouth of Pigeon river on the Minnesota boundary to the foot of lake St. Joseph, near the meridian of 90°, it is about 215 miles; from Fort Michi-

[2]Report of the Commissioners under the Treaty of Ghent made 23 October, 1826. Hertslet's Treaties, vol. xiii., pp. 898-9.

[3]The length of a degree of longtitude on the parellel of 50° is 235,171 feet, or about 44.44 English statute miles.

picoten on the east shore of lake Superior to Henley House on the Albany river, along the meridian of 85°, it is about 240 miles; and the average breadth is probably 250 miles. The area has been variously estimated; it is not less than 150,000 square miles, and it may be 175,000 square miles. Even at the lower of these estimates it is larger than Minnesota and Wisconsin by 16,000 square miles, larger than Wisconsin and Michigan by 44,000 square miles, larger by 7,000 square miles than three States the size of New York, and larger than our part of Ontario south of the French and Mattawan rivers by 100,000 square miles. The passenger train on the Canadian Pacific Railway which leaves Mattawa at the mouth of the Mattawan river at 8.11 o'clock Monday evening, and goes at a speed including all stops of 25¼ miles per hour —through North Bay and Sudbury, coasting the north shore of lake Superior 195 miles from Heron Bay to Fort William, and on through Rat Portage at the foot of Lake of the Woods—does not reach Ingolf station near the Ontario and Manitoba line until 11.57 a m. on Wednesday. But the length of the run is 1,004 miles.

From these figures and comparisons it is seen that the New Ontario is a large country—doubtless much larger than most of us down here have ever conceived or suspected, for I think it must be confessed that even the best informed among us have a great deal yet to learn of its lengths and breadths, as well as of its physical aspects and varied resources.

Geologic History of the Region.

The primitive nucleus of the continent.

But is not the title of the New Ontario something of a misnomer? May we not say that it is really the Old Ontario? Is it not the very oldest part of our continent, and has it not furnished the materials out of which not alone this lower Ontario but many States across the great lakes have been built up? Almost the whole extent of it, all excepting a portion of the Hudson Bay slope and a small area around lake Temiscaming, is a mountain built country. Through long cycles of time the most conspicuous physical feature in North America was the high range of Archæan rocks which swept in a magnificent curve through what is known in our time as the regions of Labrador, Quebec, Ontario and the Northwest Territories, around the head of Hudson bay, from the Atlantic ocean in the east to the Arctic in the north. These rocks covered an area of over 2,000,000 square miles, and we can hardly guess the height to which they were raised by the forces that heaved them into mountain masses long, it may be, before there was any sea. The average elevation is from 1,500 to 1,600 feet above the present sea level according to Logan, and probably less than 1,000 feet according to Selwyn. There are many points of 2,500 to 3,000 feet; in the Adirondacks are mountains more than 5,000 feet above the sea; and along the eastern and northern coasts of Labrador are chains estimated at heights from 5,000 to 10,000 feet. It is supposed that the denuding forces were not so great or so active in Labrador as farther west; and having in view the immense extent of the sedimentary formations, from at least the base of the Huronian upwards through the Cambrian, Silurian and Devonian systems to the relatively recent glacial drift,

which cover the region of the lakes and beyond them south and west to a depth in places of many thousands of feet, and the fact that the materials of all these excepting part of the limestones were derived from the ancient rocks of the north, the conclusion appears to be irresistible that the range or ranges, for probably there were several parallel ones, must have reached a lofty height throughout their whole extent. Logan about forty years ago gave to this primitive nucleus of the continent the name Laurentian, from the rocks which compose it forming the high mountainous country known as the Laurentides, which extend for nearly a thousand miles north of the river St. Lawrence from Quebec into Labrador. He maintained that the rocks of the Laurentian system are almost without exception old sedimentary beds which by action of heat have become highly crystalline, composed of schists, felspars, quartzites and limestones, with intrusive masses of granites, syenites and diorites, and that their aggregate thickness is not less than 30,000 feet. It seems probable however that a number of the rocks which Logan has described as stratified are of purely igneous origin, and that their foliated structure is a result of folding and shearing when under great pressure they were being raised into mountain forms. The fine-grained hornblende-gneisses, the mica-gneisses and the chlorite-gneisses are of this class, and are often traced into massive granites and granitoid gneisses, which are clearly igneous. "All of these rocks," Van Hise says, "are completely crystalline. None of them show any unmistakeable evidence of having been derived from the sedimentaries, but many can be traced with gradations into massive rocks, and therefore the greater proportion of them are igneous, if a completely massive granular structure be proof of such an origin."[4] So also Dr. Adams affirms that the indistinct foliation of the fundamental gneiss—a term used to designate the lower portion of Logan's Lower Laurentian,—is not in many cases "a survival of original bedding, but is clearly due to movements in a plastic mass." Of the upper portion of the Lower Laurentian, known as Logan's Grenville series, Dr. Adams appears to think that the crystalline limestones and gneisses, while showing great dynamic action, are in all probability made up in part if not wholly of sedimentary material, often occurring in well defined bands or layers like the strata of later formations. But as regards the so-called Upper Laurentian, which embraces the Anorthosite or Norian series of Logan, his view is that their igneous and intrusive character is well established; and that while they frequently show a distinct and often a perfect foliation, they are but eruptive masses which have found their way upward by cutting the rocks of the fundamental gneiss and the Grenville series, in many cases being thrust between the bands or strata of the latter in directions of least resistance and having foliation induced in them under pressure while deeply buried and very hot.[5] The fact is however that there are many points upon which the authorities are not yet agreed, either as regards the origin, age, classification or nomenclature of the older rocks

The Laurentian system as defined by Logan.

Views of Van Hise

and Dr. Adams.

Successive systems and their origin.

For the present purpose it is enough to be assured that while there are large areas in which eruptive masses of granite and gneiss have penetrated

[4]Journal of Geology, vol. i., p. 115. [5]Ib. pp. 328-334.

the Huronian rocks and thrown them into folds, proving thus their later age, in general the reverse is the case—the Huronian resting unconformably on the Laurentian and being therefore of later origin; that the Cambrian, Silurian and Devonian systems are in regular order more recent than the Huronian; and that these successive systems of rocks have been built out of the ruins of the underlying ones.

In the course of secular cooling, it may safely be assumed, the crust of the earth became folded by contraction to form high mountains and deep valleys, and when after the lapse of long ages the temperature had fallen to the point at which water might form and accumulate the processes of degradation and upbuilding must have gone forward rapidly. The atmosphere, the rains and the hot waters became effective agencies in altering the physical features of the earth by erosion, and the fundamental rocks began to be covered by the sedimentaries. But the internal forces were active yet and for ages after; the mountain-making folding continued, and great masses of igneous rocks were intruded into the cooling crust or extruded upon it. The waters of the sea grew in volume, the Archæan highlands subsided, and once or twice in their history, if not oftener, they were over a very large extent submerged. In that sea the Huronian rocks—possibly a portion of the Laurentian also, and the foliated members of it certainly if they are sedimentary—were laid down, but we have no data for calculating their mass. The Huronians extended over large areas to the north and south, much of which is hidden by overlying deposits; in the typical region north of lake Huron their thickness was computed by Murray to be 18,000 feet, and their aggregate thickness as originally laid down may have been not less than 40,000 or 50,000 feet. At two successive periods in their history the rocks of this great system were folded and tilted into mountain forms, followed by two long periods of active erosion during which the denundation was deep enough to remove the entire series in places, and wear the mountains down to stumps. How far, if at all, glacial agencies operated in this cutting down and carrying away of Huronian material to construct new systems, there is no means of determining; but there is nothing improbable in the supposition that they were as active in those early ages of the earth as they have been in the later period, the record of which the ice has so left written upon the face of the rocks that we may read it.

Huronian.

Following the Huronian system by the classification of the Canadian geologists, there come next in order the formations of the Cambrian system, embracing the Animikie, Nipigon and Potsdam, with an aggregate thickness of 54,000 feet according to some measurements, and of 63,000 feet according to others. The Nipigon alone has a thickness computed at 50,000 feet, composed almost wholly of gabbros, diabases, amygdaloids and lavas ejected through fissure and crater during a long period of volcanic activity, and resulting in the great east and west synclinal which forms the basin of lake Superior.

Cambrian.

After the Cambrian rocks come those of the Silurian system with a thickness in lower Ontario of over 4,000 feet, and after these we have a few

Silurian and Devonian.

formations of the Devonian with a thickness of 600 feet, the most recent of which are probably older than lake Huron, lake Erie or lake Ontario.

Relative ages of the systems.

Now from the close of the Laurentian system considerable areas of our so-called New Ontario have been dry land; and what length of time elapsed in the interval between the end of the Laurentian age and the deposition of the Chemung and Portage beds, which are the most recent of the lower Ontario formations, we may possibly conceive when it is ascertained that the aggregate thickness of the rocks is 18 to 22 miles. Or if we take only the period from the close of the Nipigon formation, during which fully three-fourths of the New Ontario was dry land, and all except the pre-Cambrian portion of lower Ontario was under the sea, we find that enough time had elapsed for the deposition of strata more than a mile in thickness. And that time must have been relatively long, as none of the rocks are of igneous origin; all are sedimentary.

Obviously therefore, when looked at from the geological point of view, the title of the New Ontario is something of a misnomer.

How does it appear when looked at in the light of modern history, of written documents and annals?

Its Human History.

Early settlements in southern Ontario.

There are few places in southern Ontario whose beginnings cannot be found within the limits of a century. Fort Frontenac, on the site of Kingston, was built in 1673, and Fort Rouille, on the site of Toronto, about 1750, and these were the only important posts in our part of the country during the French occupation. There were no settlements worthy of mention excepting those on the Detroit river until after Canada had been acquired by the British; and then the earliest were those formed by the loyalists at the close of the American war for independence. Kingston and Niagara were the first towns, and they date their origin from 1783. The first houses in Toronto were built in 1794, and the town plot of Hamilton was not laid out until 1813.

Posts of the fur traders in the north.

But in the New Ontario of the north the fur traders, both French and English, began active business more than two centuries ago, and many forts and posts were established throughout the region. The Hudson's Bay Company obtained its charter from Charles II. in 1670, and throughout the territory known as Rupert's land it was active and dominant for a period of two hundred years, or until the surrender of the territory to the Queen in 1869, at which time it occupied about twenty-five forts and trading posts within Ontario limits. Fort Albany, at the mouth of Albany river, was built by this company in 1683 or 1684, Henley House on the same river in 1744, and in 1730 a fort upon the Moose at or near where Moose Factory now stands. But the French traders were earlier on the field than the English, and for nearly a century they occupied a much larger extent of it. In 1673, the same year in which Fort Frontenac was built, they established two trading posts near the parallel of 50°, one on the Abitibi river and the other on the Missinaibi. The intrepid explorer, Daniel Dulhut, whose name is pre

served in Duluth, built a fort at the mouth of the Kaministiquia river in 1678, and called it Caministoygan; and before 1684 he built another far inland, the site of which is supposed to be at the foot of lake St. Joseph, on the northern boundary. The French also built a fort at the mouth of the Moose river in 1686, and a post at the foot of Abitibi lake before 1688. Their post at Sault Ste. Marie was established in 1670, three years before Fort Frontenac was built; and in 1731 they had reached the head of Rainy river, where La Verandrye built Fort St. Pierre, the ruins of which are yet visible under the shadow of stately trees, which have grown from seed to maturity since the time it was deserted.[6] The site of Fort St. Pierre, as well as that of Fort Frances, two or three miles below it, is one of the most beautiful in the New Ontario.

Rivalries of the French and English.

But with the loss of Canada the activity and enterprise of the French traders passed away, the blithe and hardy coureurs des bois were scattered, and for the next twenty years the Hudson's Bay Company enjoyed a monopoly of the trade in peltries with the Indians, saving the extent to which a few individual merchants and small companies in Montreal were able to send their agents and goods into the country.

In 1783 however a new competitor arose when the Northwest Company was organized, and until the two companies united in 1821 their rivalry was a strife that broke out once or twice into war. The new company was composed largely of Highland Scotch merchants, and most of their officers and clerks and many of their employés were of the same nationality; but they also recruited into their service large numbers of the forest runners trained up in the palmy days of the old French traders. The enterprise of the company was shown by the construction of a canal at Sault Ste. Marie, which was open to navigation in the summer of 1800, being fifty-five years before the completion of the canal on the American side. It had also a shipyard at the beautiful sandy point a few miles above the falls known as Pointe aux Pins, once covered with red and white pine, the best of which were cut down and used for building the company's vessels for navigating the waters of lake Superior before the close of last century.[7]

The Northwest Company.

Such instances of active enterprise no doubt go far to justify the belief expressed by Masson that had it not been for the quarrel of the Northwest Company with Lord Selkirk and the amalgamation with the Hudson's Bay Company in 1821, "the opening up of a line of communication between Canada and the Northwest Territories, and consequently the settlement of that country from Canada, would have been advanced by a quarter of a century." The interests of the Northwest Company, Mr. Masson says, were intimately bound up with those of Canada, while those of the Hudson's Bay

[6] At the entrance of the river there is a rapid (Sir Alexander Mackenzie wrote in 1801) "below which is a fine bay, where there had been an extensive picketed fort and building when possessed by the French; the site of it is at present a beautiful meadow, surrounded with groves of oaks." Voyages from Montreal, p. lvi.

[7] In the winter of 1770 Alexander Henry and his associates in a mining enterprise on the north and south shores of Lake Superior, built a barge fit for the navigation of the lake at their shipyard at Point aux Pins, and laid the keel of a sloop of forty tons; but it was not until August of 1772 that the sloop was launched.—Henry's Travels, pp. 226 and 234.

Company were in an entirely opposite direction.[8] So bright indeed seemed the outlook for Sault Ste. Marie at one time that it was pointed out as offering the best market for the farm products of the country around Toronto. "The soil in the neighborhood of York (Toronto) is said to be rich," John Johnston of the Sault wrote in 1809, "and the farmers could raise a vast quantity of provisions, were they encouraged by having a sure market for them. This could easily be accomplished by opening a communication with the Bay of Machedash, from whence to the Island of St. Joseph the distance is only ninety leagues. From the bay, a chain of islands extends to the northwest, of which St. Joseph is the last; these render the navigation perfectly safe, as you may either keep outside of them or between them and the shore, with safe anchorage everywhere. By this channel, provisions may be brought to St. Joseph, St. Mary and Michilimackinac in half the time and for half the expense they are procured from Sandwich, Detroit, etc., and the returns from the above places would arrive much sooner and safer at Montreal." Concerning the fortunes of Matchedash itself under this scheme, Johnston had not a doubt on his mind "but that it would soon become the most thriving place in Upper Canada, and the centre of provisions and transport trade for the fur countries."[9]

Sault Ste. Marie.

But the chief seat of the Northwest Company's enterprise was on the north shore of Lake Superior. Fort Charlotte, the place first selected, was at Grand Portage, at the mouth of Pigeon river. Fearing however that it might be within the United States boundary, a new location for business headquarters was chosen at the mouth of the Kaministiquia river and named Fort William, after William McGillivray, one of the partners of the company.[10] It soon became the most important post north of the great lakes,

Fort William.

[8] In Cauchon's memorandum it is stated that the Canadian Northwest Company were everywhere in advance of their rivals. "They were the first to spread themselves beyond the limits of the French, over the prairies of the Saskatchewan; they were the first to discover the great river of the north, now bearing the name of Mackenzie, and pursue its course to its discharge in the frozen ocean; they were the first to penetrate the passes of the Northern Cordilleras and plant their posts upon the shores of the Pacific; and with such indomitable energy did they carry on their business that, at the period of Lord Selkirk's interference, they had upwards of 300 Canadians, 'voyageurs,' employed in carrying on their trade to the west of the Rocky Mountains."

[9] John Johnston's Account of Lake Superior in Les Bourgeois de la Compagnie du Nord-Ouest, by L. R. Masson, vol. II.

[10] The first fort on this river was built by Dulhut in 1678, and it was re-built by La Noue under instructions from the French Government in 1717. The name Kaministiquia (which has undergone many modifications of orthography) is said by John Johnston to mean the "river of difficult entrance," and by Sir John Richardson the "river that runs far about," while Dr. Bigsby translates it "the river of the isles."

A further interesting narrative of how the seat of the fur trade on lake Superior came to be transferred from Fort Charlotte to Fort William is given by Dr. Bigsby: "During great part of the eighteenth century," Dr. B. writes, "before the union of the Indian traders into one company, the Northwest, the Lake Superior end of the Grand Portage was a pent-up hornets' nest of conflicting factions intrenched in rival forts. The traders first coalesced into two companies, one called the 'X. Y. Company,' from a mark placed on their packs, and consisting of Sir Alexander McKenzie and Messrs. Ogilvy, Richardson and Forsyth; and of the Northwest Company, at whose head were Messrs. W. and S. McGillivray, McTavish and others. Latterly both these firms united to contend with the old Hudson's Bay Company, acting under the charter of Charles the Second and later parliamentary sanction. The American Government, properly conceiving that the Grand Portage, the centre of so much commercial activity, was within their territory, signified about the year 1802, to the amalgamated company, now called the Northwest Company, their intention of imposing a duty of from twenty to twenty-five per cent. on all goods landed there. After having in vain offered a composition of five per cent., the Northwest Company abandoned the place, but not before they had well examined the Pigeon river from the north end of the Grand Portage down to lake Superior. Sir Alexander McKenzie occupied a long time in this task, accompanied by two Indians, but they found that high falls, rapids and shelving precipice,

and at some seasons of the year the number of traders assembled there was not less than 3,000, gathered from all quarters of the Northwest to which the operations of the company had extended.

Councils and banquets of the Northwest Company at Fort William.

But Fort William was something more than the central depot for the exchange of furs and goods. It was the meeting place where the affairs of the company were planned every year between a few of the leading partners at Montreal and partners from the various trading stations in the wilderness. "Here, in an immense wooden building," to quote Washington Irving, "was the great council hall, as also the banqueting chamber, decorated with Indian arms and accoutrements, and the trophies of the fur trade. The house swarmed at this time with traders and voyageurs, some from Montreal, bound to the interior posts, some from the interior posts bound to Montreal. The councils were held in great state, for every member felt as if sitting in parliament, and every retainer and dependent looked up to the assemblage with awe, as to the house of lords. There was a vast deal of solemn deliberation, and hard Scottish reasoning, with an occasional swell of pompous declamation. These grave and weighty councils," Irving goes on to say, "were alternated by huge feasts and revels, like some of the old feasts described in Highland castles. The tables in the great banqueting room groaned under the weight of game of all kinds; of venison from the woods, and fish from the lakes, with hunters' delicacies, such as buffaloes' tongues and beavers' tails; and various luxuries from Montreal, all served up by experienced cooks brought for the purpose. There was no stint of generous wine, for it was a hard-drinking period, a time of loyal toasts, and bacchanalian songs, and brimming bumpers."[1]

A sketch by Washington Irving.

Neither Toronto, nor Niagara, nor Kingston could approach the commercial greatness of Fort William ninety years ago; and in no part of the interior of the lower peninsula were such scenes of activity to be witnessed as along the highways of trade in the interior of the northern country, from the Ottawa river to Lake of the Woods.

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rendered the river utterly impracticable for commercial purposes. The company then built their Fort William, and made the Dog river and other streams and lakes their road into the Northwest fur countries, although this is inferior in every respect to the old route, so much so, that the voyageurs had to be coaxed and bribed into the use of it. I am obliged to Mr. Astronomer Thompson for this information."—The Shoe and Canoe, or Pictures of Travel in the Canadas, by John J. Bigsby, M D., vol. II., pp 240-1.

[1] Irving's Astoria, p. 8 (Bohn's edition). The X. Y. Company, which was a section of the Northwest Company, was detached from it in 1796 but re-united with it in 1804, and had its headquarters at Grand Portage. The mode of living there is described as follows by Sir Alexander Mackenzie (Voyages from Montreal, p. xlvi): "The proprietors, clerks, guides and interpreters mess together, to the number of sometimes an hundred, at several tables, in one large hall, the provision consisting of bread, salt pork, beef, hams, fish, and venison, butter, peas, Indian corn, potatoes, tea, spirits, wine, etc, and plenty of milk, for which purpose several milch cows are constantly kept. The mechanics have rations of such provision, but the canoe-men, both from the north and Montreal, have no other allowance here, or in the voyage, than Indian corn and melted fat. The corn for this purpose is prepared before it leaves Detroit, by boiling it in a strong alkali, which takes off the outer husk; it is then well washed, and carefully dried upon stages, when it is fit for use. One quart of this is boiled for two hours, over a moderate fire, in a gallon of water; to which, when it has boiled a small time, are added two ounces of melted suet; this causes the corn to split, and in the time mentioned makes a pretty thick pudding. If to this is added a little salt (but not before it is boiled, as it would interrupt the operation), it makes a wholesome, palatable food, and easy of digestion. This quantity is fully sufficient for a man's subsistence during twenty-four hours, though it is not sufficiently heartening to sustain the strength necessary for a state of active labour The Americans call this dish Lominee." In a foot note Sir Alexander adds that corn is "the cheapest provision that can be procured, though from the expense of transport the bushel costs about twenty shillings stirling at the Grand Portage. A man's daily allowance does not exceed tenpence."

Routes from lake Superior to the Northwest.

From lake Superior there were two routes to the Northwest; one from Grand Portage through the boundary waters to Rainy lake; and the other up the Kaministiquia river and Dog lake, across the long portage to Savanne river, and thence through Lac de Mille Lacs and a succession of smaller lakes, down the Maligne and Meccan or Namakan rivers into Rainy lake. The latter was the route usually taken by the Northwest Company's traders; and from the pen of R. M. Ballantyne, who came over it on his way from Norway House to Montreal in 1845, we have a graphic picture of the scenes that must have been witnessed along those waterways for well nigh forty years, covering the close of the eighteenth and the beginning of the nineteenth century. "Many years ago, in the time of the Northwest Company," Ballantyne writes, "the echoes among these wild solitudes were far oftener and more loudly awakened than they are now. The reason of it was this. The Northwest Company, having their headquarters at Montreal and being composed chiefly of Canadian adventurers, imported their whole supplies into the country and exported all their furs out of it in north canoes by the same route over which we now travelled. As they carried on business on a large scale, it may be supposed that the traffic was correspondingly great. No less than ten brigades, each numbering twenty canoes, used to pass through these scenes during the summer months. No one who has not experienced it can form an adequate idea of the thrilling effect the passing of these brigades must have had upon a stranger. I have seen four canoes sweep round a promontory suddenly and burst upon my view, while at the same moment the wild, romantic song of the voyageurs, as they plied their brisk paddles, struck upon my ear; and I have felt thrilling enthusiasm on witnessing such a scene. What then must have been the feelings of those who had spent a long, dreary winter in the wild northwest, far removed from the bustle and excitement of the civilized world, when thirty or forty of these picturesque canoes burst unexpectedly upon them, half shrouded in the spray that flew from the bright vermilion paddles, while the men, who had overcome difficulties and dangers innumerable during a long voyage through the wilderness, urged their light craft over the troubled water with the speed of the reindeer, and with hearts joyful at the happy termination of their trials and privations, sang with all the force of three hundred manly voices one of their lively airs, which rising and falling faintly in the distance as it was borne, first lightly on the breeze, and then more steadily as they approached, swelled out in the rich tones of many a mellow voice and burst at last into a long, enthusiastic shout of joy. Alas!" Mr. Ballantyne exclaims, "the forests no longer echo to such sounds. The passage of three or four canoes once or twice a year is all that breaks the stillness of the scene; and nought save narrow pathways over the portages, and rough wooden crosses over the graves of the travellers who perished by the way, remains to mark that such things were."[12]

A pen picture from Ballantyne.

[12] R. M. Ballantyne's Hudson's Bay, pp. 279-80. As descriptive of the kinds of canoes used by the fur traders, Mr. Ballantyne says: "A number of canôtes de maitre, or very large canoes, are always kept in store here [Fort William] for the use of the Company's travellers. These canoes are of the largest size, exceeding the north canoe in length by several feet, besides being much broader and deeper. They are used solely for the purpose of travelling on lake Superior, being much too large and cumbersome for travelling with through the

Such was our new Ontario under the regime of the trading companies; it had an early beginning as compared with the Ontario of the south; but the stronger of the companies absorbed or devoured the weaker, and while large profits were earned the country was not in the faintest degree bettered in the end by their operations. It had always indeed been the policy of the Hudson's Bay Company to keep up the primeval state of the forest, as the founding of settlements was incompatible with the life of the fur trade. Moreover, history teaches the lesson that a company organized with powers of government and exclusive rights to carry on trade in a country has for its first consideration the commercial idea, and everything else is subordinate. The Hudson's Bay Company had no other thought for the two centuries during which it held sway in northern Canada than how the largest dividends could be earned for the shareholders. So it was with the English East India Company, whose over-ruling hand was felt in India for more than two and a half centuries, down to the close of the Mutiny. And so we have just seen it to be with the British South Africa Company, whose filibustering raid into the Transvaal came perilously near to plunging Europe into war. The Hudson's Bay Company relinquished its authority over the territory of northern Ontario—the portion of it beyond the height of land—in 1869; but it took twenty years to settle the disputes which arose afterwards between the Dominion and Provincial Governments as to the true boundaries and the ownership of the land, timber and minerals. Therefore it is only since 1889, when the limits on the north and west were determined by Imperial Act, that settlers, lumbermen and mining prospectors have been sure of titles over a large extent of the region. And this is why it is called the New Ontario.

The commercial idea paramount with trading companies.

Physical Aspects of the Country.

The physical features of the country cannot be accurately described yet, because they are not sufficiently known. There is a height of land extending westward from the Quebec boundary as far as the 90th meridian, which forms the watershed between Hudson bay and the great lakes. There is another, running northward near the 90th meridian from the American boundary to the 50th parallel, and then turning north-westward between lake St. Joseph and lake Seul, enters Keewatin territory and reaches Hudson Bay near the mouth of Nelson river.

Watersheds and river systems.

The first of these watersheds to the north includes the basin of the Moose river, with its three large tributaries, the Abitibi, the Metagami and the Missinaibi; and a portion of the basin of the Albany river, with the Kenogami as its chief tributary from the Ontario side.

Moose river basin.

South of the watershed are numerous rivers flowing into the St. Lawrence system of waters, including the Montreal, which joins the Ottawa; the French, which drains lake Nipissing and its tributaries, and lake Wahnapitae

St. Lawrence river basin.

interior. They are carried by four men instead of two, like the north canoe; and, besides being capable of carrying twice as much cargo, are paddled by fourteen or sixteen men. Travellers from Canada to the interior generally change their canôtes de maitre for north canoes at Fort William before entering upon the intricate navigation through which we had already passed; while those going from the interior to Canada change the small for the large canoe." pp. 287-8.

through a river of the same name, into Georgian bay ; the Whitefish, Spanish, Mississaga and Thessalon, into lake Huron ; and a number of rivers into lake Superior, the largest of which are the Goulais, Michipicoten, White, Pic, Nipigon and Kaministiquia.

Lakes with double outlets.

The headwaters of those streams flowing north to Hudson bay and south to the great lakes often interlace each other, and there are a number of lakes on the tableland which discharge their waters both north and south. Shoal lake, northeast of lake Nipigon, is one of these. It is 300 feet above the level of lake Nipigon, to which it sends a contribution of its waters down the Ombabika river, and 1,200 feet above the level of the sea, to which an equal contribution is made through the channels of the Powitic and Albany rivers. "No portage occurs on the Ombabika for about nine miles before reaching Shoal lake," Dr. Bell reports, "nor for nearly five miles beyond its northern outlet ; so that we pass d the height of land with the greatest possible ease, having had about s vente en miles of uninterrupted canoe navigation from the time we made the last portage on the southern side till we came to the first in going down on the northern."[13] Lake Temagami, which lies about thirty miles north of the west end of lake Nipissing, is remarkable for having had at one time four outlets ; but since its level has fallen the number is reduced to two—the Metabechawan river to the Ottawa, and the Sturgeon to lake Nipissing. By these lakes along the northern divide and the streams which discharge their waters, Ontario is found to be cut up into a number of islands, the largest of which is the one we occupy.

Nelson river basin.

The portion of the Province west of the north and south watershed, near the 90th meridian, lies within the basin of the Nelson river, which, next to that of the Mississippi, is the largest river basin on the continent. Lake Seul in the north, Rainy lake in the south, and Lake of the Woods in the west collect the Ontario waters of this basin to discharge them through Winnipeg river into the lake of that name, there to mingle with the waters of Red river from the highlands of Minnesota and of the Saskatchewan from the Rocky mountains, and be borne by the mighty Nelson into Hudson bay.

In the closing period of the glacial age, as the ice field slowly retreated towards the arctic circle, the region towards which those streams from the eastern, southern and western slopes converge became the bed of what was no doubt the largest fresh water lake ever formed upon this earth. Lake Agassiz.

Lake Agassiz, for that is the name by which it is now known, is traced as to its shore lines by well defined gravel and sand beaches from the height of land in Minnesota northward to the 55th parallel, and at least from Rainy lake, if not from lake Seul, west to the Souris river. The area of this lake is computed to have been 110,000 square miles, or about 15,000 square miles larger than the combined areas of the lakes Superior, Michigan, Huron, Erie and Ontario.[14] The valley of Rainy river, as well as the plains of Minnesota, Dakota and Manitoba, owe their fertility to the silt deposited in this ancient lake ; and it is not unlikely that we owe to its action also, to some extent, the

[13] Geol. Sur. Can., 1871-2, p. 107.

[14] Warren Upham in Can. Geol. Sur., 1888-9, p. 11E.

deeply indented shore lines of Rainy lake and Lake of the Woods, which promise to aid in the development of the resources of the country bordering upon them by the facilities they offer to an extended navigation.

A land of lakes and rivers.

But like every country over which the glaciers moved, the whole north is a land of lakes, and so throughly is it threaded by streams running into and out of the labyrinth of lakes that the skilled woodsman with his canoe may steer his way in any course at his will. Many of the lakes, too, are of rare beauty, with clear blue waters and studded with lovely islands, of which Temagami, Crow, Shebandowan, Greenwater and Baril are fair types. Temagami lake, 600 feet, and Crow lake, 800 feet deep, are among the most picturesque in the world. Of rivers also there is an infinite variety, of all breadths and lengths and colors; and even in the same stream one may discover every shade of change. For miles together it may be level and placid as a stretch of canal. Then the rocky banks are seen to contract, the current becomes a rapid, and presently expands into a lake. Or there are shallows, a maze of channels through islets clothed with spruce or cedar, a terraced fall, a swirl of eddies, a rush of the foam-flecked flood between walls of rock, with the almost constant lakelet or lagoon in a setting of dark woods beyond, where in a margin of grass or reeds—

> The lotus lolls on the water,
> And opens its heart of gold,
> And over its broad leaf-pavement
> Never a ripple is rolled.[15]

A typical canoe route.

And so the rounds of change go on through shifting scenes of quiet and turbulence. Such a river is the Seine, which, flowing out of Lac des Mille Lacs, carries down in its tortuous way to Rainy lake the overflow of a thousand other lakes besides. A canoe trip starting from Savanne on the Canadian Pacific Railway, traversing Lac des Mille Lacs, Baril, Brule, Windigoostigwan, Elbow and Crooked Pine Lakes, and thence down current on the Atik-okan and Seine rivers to Rainy lake, and on, if one is in the mood, across this lake to Fort Frances, down the Rainy river to Hungry Hall, and over Lake of the Woods to Rat Portage, where the Canadian Pacific Railway is reached again,—this is an outing as replete with interest and exhilaration, and offers as much in the way of adventure, as the heart of any lover of nature can desire. Especially so if it is taken late in the summer or early in the autumn, when the poplar woods are beginning to golden, and the mountain ash is laden with red-ripe clusters of berries, and the career of the pestilent black fly is over and gone for the season.

The Hudson bay slope.

The information we possess of the Hudson Bay slope is practically limited to what has been seen along the rivers, for it is doubtful if any white man has yet crossed that country from east to west north of the 49th parallel. The general impression is that a large portion of the basin of Moose river is a treeless waste, covered with peat bogs, and not likely to have any agricultural value. But until more is known of it than any traveller or explorer has yet learned by canoeing up and down the chief rivers, with here and there an excursion of one or two miles into the timber out from their banks, it is useless to speculate on the future of this region.

[15] From Cleopatra, by W. W. Story.

A large tract of rich and well-timbered land on the Quebec side.

The discovery of what appears to be a most valuable tract of country on the Quebec side, east of the Moose river basin, has only been made known to us during the past year. By the explorations of Henry O'Sullivan, of the Crown Lands Department, Quebec, and of Dr. Robert Bell, of the Geological Survey, it has been ascertained that in the basin of the Nottaway river and its tributaries, the Waswanipi and the Mekiskan or Bell, there is a tract of rich and finely-timbered land as large in extent as the whole of England, of which nothing whatever was known two years ago. The description given of it in Mr. O'Sullivan's report, recently published, is intensely interesting to every Canadian, as well as to students of physical geography, and inspires us with the hope that regions of perhaps equal extent and value may be found in Ontario also, beyond the height of land. We shall only know by exploring for it, as has been done in Quebec. The Hudson's Bay Company, whose only interest is in the fur trade, we can depend will never tell us any good thing of the country which might have the effect of inviting the settler, the miner or the lumberman to disturb the haunts of the Indian trapper and hunter.[16]

Physical Characteristics and Natural Resources.

Geological systems of the region.

After the account already given of the Archæan rocks of the New Ontario, it is not necessary to write more than a few words on its geology. Belts of the Huronian system of rocks, running generally in a northeast and southwest direction, overlie the Laurentians all the way from Lake of the Woods to the Ottawa river, and extend to the southern limits of the territory along the international boundary and the shores of lake Superior and lake Huron. What is known as the "great belt" of this system stretches from lake Superior north of lake Huron to lake Mistassini in Quebec, a length of about 700 miles. Around lake Superior there are Cambrian rocks (of the Animikie and Nipigon series) overlying the Huronian, and it is thought also that there is an area of Lower Cambrian north of lake Huron, in the basin of the Vermilion river, the length of which is thirty-six miles and the greatest breadth 8 miles. Around Sault Ste. Marie is a formation of red sandstone which is believed to be of Potsdam age; west and northwest of lake Temiscaming is an important area of Niagara limestones; while on the Hudson Bay slope, lying up over the Laurentian and Huronian rocks and

[16] In the report of his explorations, dated 15th May, 1895, Mr. O'Sullivan says: "The general impression, formed no doubt from the experience of surveyors and explorers in this Province, was that all that northern region was a cold rocky waste, and certainly any one who would visit the head waters of any of our large rivers flowing into the St. Lawrence from the north would naturally be impressed with the feeling that there was little use in searching for anything worth having, excepting perhaps fish, game and minerals, any farther north, and I must confess that this was my own impression until last summer. On St. Jean Baptiste day, 24th June last (1894), the Reverend Father Gueguin said mass in my tent at the foot of lake Dumoine. That reverend gentleman has been missionary among the upper Ottawa and Hudson bay slope Indians for nearly thirty years. After mass, as we were descending the Dumoine river in company with Mr. L. A. Christopherson, Father Gueguin, in relating some of his experience among the Indians, told me of having seen some good land and large timber in the neighborhood of lake Waswanipi, and strongly advised me to try and explore that country. Mr. Christopherson, guardian of the Hudson's Bay Company's post at Grand Lake Victoria for the last twenty years, was of a different opinion. He said that he did not think there was anything worth having beyond the height of land. To use his own words: 'The interior Indians who visited the post could not get an axe-handle there.'" This is in keeping with the traditional policy of the Hudson's Bay Company.

extending from the eastern boundary of the Province westward beyond the Kenogami river, are several formations of the Silurian and Devonian systems, including the Niagara, Onondaga and Corniferous rocks. In the region southwest of James bay, Dr. Bell says, the Corniferous formation occupies an area larger than all the western peninsula of Ontario.

Resources of the forest.

Of all the natural resources of the New Ontario the forest is the one of most obvious value, for there is nothing to hide or obscure it. There are yet wide tracts of pine land, although many square miles have been cut over by the lumberman and more have been swept and destroyed by fire. It seems likely that most of the country now covered with poplar was one time under pine. West of Port Arthur the pine forest was burnt over within the memory of men yet living. In his Narrative of the Red River Expedition of 1857 Prof. Hind says he found extensive areas covered with burnt forest trees, chiefly of pine, in the valley of the Kaministiquia river as far as Little Dog lake, where the formidable barrier of Great Dog lake comes into view. On Dog river he observed wide areas strewed with the blackened trunks of trees; and in the young forest which seemed fresh and green at a distance, "the ground was found to sustain the charred remains of what had once been a far more vigorous vegetation."[17] And of the country beyond Lac des Mille Lacs he writes: At Brulé portage [between Baril and Brulé lakes] I ascended a steep hill bordering a small rapid stream called Brulé river, and from an altitude of fully 200 feet had a fine view of the surrounding country. The vegetation upon the hillside and summit was truly astonishing, and the term Brulé portage received an unexpected interpretation on finding hidden by a rich profusion of brushwood the dead trunks of many noble pines Throughout the day the tall trunks of white pine, branchless and dead, rising in clumps or in single loneliness far above the forest, had attracted attention, and on the side of the Brulé hill we observed many prostrate half-burnt trees of the largest size. One dead trunk was measured and found to be twelve feet in circumference five feet from the ground. A living tree, tall, clean and apparently quite sound, measured nearly ten feet in circumference, and many of the prostrate pines were of equal dimensions. There can be little doubt that these were the remains of a magnificent white pine forest, which formerly extended over a vast area in this region, since from the summit of the hill the forms of scattered living trees, or tall branchless and scathed trunks met the eye in every direction. The young second growth indicated a soil not incapable of sustaining pine trees of the largest proportions; black cherry, birch (both white and black), alder, small clumps of sugar maple, and a thick undergrowth of hazelnut now occupies the domain of the ancient forest. The southwest side of this hill formed a precipitous escarpment 150 feet above the waters of a long, clear lake. All around the eye rested upon low dome-shaped hills dipping towards the northeast and covered with a rich profusion of second growth. The vast wilderness of green was studded with black islands of burnt pine, and a few isolated living trees, serving by their surprising dimensions to tell of the splendid forest which must have once covered the country. . . The uniform size of

Evidences of devastation by fires.

[17] Vol. I., p. 49.

second growth timber on the Brulé hill seemed to prove that the great fire which devastated this region may have occurred about thirty years since." That would be about seventy years ago. Another fire which destroyed a valuable pine forest occurred about twenty-five years ago in what is now known as the Sudbury country, north of lake Huron. It is said that in one day this fire ravaged a tract seventy miles long by thirty wide, or in all about 2 000 square miles.[19] The same region, Indian tradition says, was burnt over about one hundred and thirty years ago. Indeed it is very probable that successive forests have grown up and have perished in the flames in past milleniums, since the land became fitted for the sustaining of tree life upon it. Hitherto little use has been made of timber other than pine, of which there are immense areas in the New Ontario; but it is certain to find a market, and the Province will yet derive a large revenue from it. Even now there is an active demand for poplar and spruce for the manufacture of pulp, and this is fast becoming an industry of great magnitude. As for the future, one hardly dares trust himself to forecast what our needs may be a century or a quarter of a century hence, for the wit of man is seeking out many inventions. But in all human probability we shall never be able to find a complete substitute for wood in the arts; and it is not too early now for adopting schemes to conserve our forests. There are many parts of the north so rough and rocky as not to possess any prospective value for agriculture, but suitable enough for forest growth. What better policy can be chosen as regards such tracts than to set them apart in perpetuity as Crown forests? This is a simple plan, and it possesses the merit of being well started already, in the sense that Nature has planted the trees and prospered their growth under its own conditions.

The conservation of forests.

As an agricultural country, there is much to be said for the north. It is true, as just stated, that many parts are too rough and rocky for tillage; but other parts are as full of promise as any of our older counties. This is especially true of the river valleys north of lake Huron, where the soil is wonderfully productive. And there are many other areas of equal excellence, such for example as the regions around lake Temiscaming (where twenty-five townships embracing 575,000 acres are surveyed), to the north and west of

Agricultural capabilities of the new Ontario.

[18] Hind's Narrative, vol. I, pp. 63 64.

[19] The first fire in this region occurred in 1864, and extended from lake Nipissing to Bruce Mines along the shores of Georgian bay and lake Huron. The fire of 1871 followed in the wake of the previous one, but covered a much larger area in the interior. Mr. D. F. Macdonald of Parry Sound, who knows the region intimately, writes me: "The hardwood ridges and dense swamps seemed to be the only effective barriers of the conflagration. Lakes and rivers made no break in the fiery torrent as it rushed along the pine-clad and moss-covered ridges of rocks and sandy or gravelled plains. The fire of 1871 was doubtless the fiercest, as it destroyed every tree and plant in its course, as well as animals. I found the charred bones of an Indian on the Wahnapitæ river in the autumn of 1872, and no doubt he had been smothered in the smoke and flames. The burnt barrel of his gun, his hatchet, knife and kettle, with the metallic buttons of his clothes and a few wrought iron nails from the canoe, were all commingled with his charred bones. This shows that the fire was heavy and hot when an Indian would become a victim to its ferocity. Had he followed the river he would have been swept over the falls; he ran the fiery gauntlet about half way across the portage with the canoe on his shoulders, when he fell smothered with smoke and heat and was cremated on the spot. Both fires originated in the neighborhood of lake Nipissing, and in 1871 there were no persons on that lake except John Beatty at the mouth of South river, and Norman McLeod, the Hudson's Bay trader, near the mouth of the Sturgeon, and a few Indians on the Beaucage reserve, on Goulais point, and at the Chandiere falls." The fire of 1864 took place in the first week in May, Mr. Samuel A. Marks of Bruce Mines informs me. Only five houses were saved in the Copper Bay section of the village, and about 1,500 people were left homeless.

lake Nipissing, and in the valley of the Vermilion river. For the growth of peas and oats, timothy and clover, and root crops of all kinds, there is no more suitable land anywhere than in those districts; and they are equally well adapted for the dairy industry and the production of beef and mutton, as the pastures are nourishing and water abounds everywhere. Beyond Port Arthur and Fort William there are many good farms, and on the Wabigoon river, 200 miles from Fort William, there is a tract of land now being opened for settlement, where the Ontario Government has already established a dairy farm, which promises remarkably well. No doubt many other regions of fertile land exist throughout our northern domain; but of those that are well known it may be safe to say that the largest and best is the country on the Rainy river lying between Rainy lake and the Lake of the Woods. Writing of this district and the river itself in his Narative of a Journey round the World, Governor Simpson of the Hudson's Bay Company said: "From Fort Frances downwards, a stretch of nearly a hundred miles, it is not interrupted by a single impediment, while yet the current is not strong enough naturally to retard an ascending traveller. Nor are the banks less favorable to agriculture than the waters themselves to navigation, resembling in some measure those of the Thames near Richmond. From the very brink of the river there rises a gentle slope of green sward, crowned in many places with a plentiful growth of birch, poplar, beech, elm and oak. Is it too much for the eye of philanthrophy to discover, through the vista of futurity, this noble stream, connecting as it does the fertile shores of two spacious lakes, with crowded steamboats on its bosom, and populous towns on its borders?"[20] This is a glowing description for a Hudson's Bay officer to give; but Governor Simpson recanted it with ingenuity when the claims of his company seemed to be in jeopardy before a committee of the Imperial House of Commons a few years afterwards. When the passage from his book was read to him, first by Mr. Gordon and subsequently by Mr. Roebuck, Governor Simpson said he only meant the description to apply to the bank, "the lip of the river" as he phrased it. "The back country is a deep morass, and never can be drained, in my opinion." And again: "I confine myself to the banks; the back country is one deep morass extending for miles." The Governor's explanation was ingenious in a little sense, but it had the demerit of being untrue. The fertile land along the Rainy river on the Ontario side extends nearly from one lake to the other, a distance of about eighty miles, and its breadth is said to range from five to twenty-five miles. The land also rises steadily towards the north, so that drainage is easy; indeed the swampy ground a mile back from the river is found by levels to be seventy feet above it. The soil is deep and rich, and the climate is favorable for the maturing of almost every kind of cereal grown in lower Ontario. Ballantyne, who ascended the river on his way from Norway House to Montreal, as previously noted, has given us his impressions of it in a book published long after he had left the service of the Hudson's Bay Company. "Next morning [September 11, 1845] we commenced," he writes, "the ascent of Lac la Pluie river. This is decidedly the

The Rainy river district.

Governor Simpson's testimony and

his ingenious recantation.

Real character of the land.

[20] Narrative of a Journey Round the World during the years 1841 and 1842, vol. i., pp. 45 6.

Ballantyne's testimony.

most beautiful river we had yet traversed—not only on account of the luxuriant foliage of every hue with which its noble banks are covered, but chiefly from the resemblance it bears in many places to the scenery of England, recalling to mind the grassy lawns and verdant banks of Britain's streams, and transporting the beholder from the wild scenes of the western world to his native home. The trees along its banks were larger and more varied than any we had hitherto seen,—ash, poplar, cedar, red and white pines, oak and birch being abundant, whilst flowers of gaudy hues enhanced the beauty of the scene."[21] This is almost a true picture, but settlement now extends along many miles of the river on the Ontario side, and to some extent at least the forms of natural beauty have been changed and marred. The description however is remarkably faithful of the Minnesota side, where, except for glades with wide-branching elms and a few gaps cut by squatters, the banks are yet clothed with the primeval forest.[22]

Extent and value of the country's mineral wealth.

But the best hopes for the New Ontario are no doubt built upon its mineral wealth, the extent and value of which we are only beginning to realize. The rocks of the Huronian and Cambrian systems are found to be mineral-bearing over a wide extent; and from the number of discoveries made every year in new and unexpected localities, we have an assurance that as yet only a little of this hidden treasure has come to be known. In the Animikie slates of the Cambrian system silver mines have been worked at points far apart, some of which have proved to be very rich. Silver Islet alone has yielded upwards of $3,000,000. In the Nipigon rocks of the same system native copper and copper sulphide have been discovered at many places, but notably on Michipicoten island and point Mamanise, where the occurrences are the same as on Keweenaw point on the south shore. But too much of the exploratory work hitherto has been extravagantly done, both on the island and the mainland. As an illustration, it may be stated that the Quebec Mining Company in 1848 50 expended at Point of Mines $232,256, chiefly above ground, before any quantity of ore was raised or the lodes were proved to be valuable. A village of fifty or sixty houses was built for miners and other employés, besides offices, stores, magazines and a sawmill. Inspector William Gibbard, who visited the location in 1860, reported that

Silver.

Copper, nickel and cobalt.

[21] R. M. Ballantyne's Hudson's Bay, p. 272.

[22] In his Voyages from Montreal, p. lvi, Sir Alexander Mackenzie says of the Rainy river and the country along its banks: "This is one of the finest rivers in the Northwest, and runs a course West and East one hundred and twenty computed miles; but in taking its course and distance minutely I make it only eighty. Its banks are covered with a rich soil, particularly to the North, which, in many parts, are clothed with fine open groves of oak, the maple, the pine, and the cedar. The Southern bank is not so elevated, and displays the maple, the white birch and the cedar, with the spruce, the alder, and various underwood. Its waters abound in fish, particularly the sturgeon, which the natives both spear and take with drag-nets. But notwithstanding the promise of this soil, the Indians do not attend to its cultivation, though they are not ignorant of the common process, and are fond of the Indian corn, when they get it from us. Though the soil at the foot is a stiff clay, there is a garden, which, unassisted as it is by manure, or any particular attention, is tolerably productive." Dr. Bigsby, who went down the Rainy river in 1823, makes this reference to it in his book, Shoe and Canoe: "A thousand years ago, while yet our England was a wolfish den, the silver Trent of the midland counties must have greatly resembled the Lapluie of the present day. I am not sure that the fur trader, an Italian perhaps, had not a hut on its banks; but certainly at the time we are speaking of both these streams flowed smoothly and freely in a succession of lovely and sequestered reaches, and through terraced meadows, alternating with rich woods and reedy marshes. The Lapluie seems made for a pleasure excursion; all is serenity and beauty." Vol. II., p. 270.

he found smelting works, crushing mills, jigging works, stamp forges, railroads, hundreds of yards of iron chain, ladders, furnaces, scows, etc., in a dilapidated state, thousands of fire brick, and an expensive conduit about one mile long made to convey water to the stamps.[23] This was expenditure preparatory to mining, before it had been proven that there was more than a surface show of ore; and the capital being thus wasted the company was left without means to carry on the actual work of mining or establish the value of their property by sinking deep shafts upon the veins.[24] It is however in the Huronian system of rocks that the greatest variety of minerals is to be found. Ores of copper, nickle, iron, gold and other metals have been discovered, and operations are carried on which promise to establish a large industry. At the Bruce and Wellington mines, north of lake Huron, copper mining was carried on for about 27 years, ending with 1875, and the value of the output in that time is reported to have been as much as $7,000,000. At the Sudbury mines, the ores of which yield nickle, copper and some cobalt, the total ore output of the mines for the six years 1890-95 was 539,936 tons, of which there was smelted and reduced to matte in the furnaces 430,539 tons. For five years 1891-95 this industry paid for labor at the mines and works the large sum of $1,436,216; and the value of the products of nickle, copper and cobalt for the four years 1892-5, computed at the selling price at the furnaces, was $2,781,800, or an average of $695,450 a year. Iron ore has been found in many localities in the Huronian formations, but the largest and most valuable deposits are believed to be the hematites of the Mattawin

Bruce and Wellington mines.

Sudbury mines.

Iron.

[23] Report of the Commissioner of Crown Lands of Canada for 1860, p. 90.

[24] In 1767 and 1768 the east shore of lake Superior was explored by Alexander Henry and copper was discovered at a number of points from Mamainse headland to Michipicoten harbor, which was called by the Indians the coast of Nanibojou. In the spring of 1768 Mr. Henry met Alexander Baxter, his partner, to whom he communicated the information of his discoveries, and measures were taken for working the mines. In 1770 Mr. Baxter returned from England, bringing with him papers by which, with Mr. Bostwick and himself, Mr. Henry was constituted a joint agent and partner for working the mines. They passed the winter together at Sault Ste. Marie and built a barge fit for the navigation of the lake, besides laying the keel of a sloop of forty tons. In May, 1771, they went to explore the island of Yellow Sands (Caribou island) where they hoped to find gold, but a stay of three days did not enable them "to find gold, nor even the yellow sands." On the fourth day they sailed to the east shore, examined the coast of Nanibojou where they found several veins of copper and lead, and returned to Point aux Pins, where they erected an air furnace. The assayer made a report on the ores, stating that the lead ore contained silver in the proportion of forty ounces to the ton, and the copper ore only in very small proportion. The rest of the season and the following winter and spring were passed in exploring and mining at Ontonagon on the south shore; but in June the whole establishment of miners returned to Sault Ste. Marie. "In the following month of August," Henry records, "we launched our sloop, and carried the miners to the vein of copper ore on the north side of the lake. Little was done during the winter; but, by dint of labor performed between the commencement of the spring of 1773 and the ensuing month of September, they penetrated thirty feet into the solid rock. The rock was blasted with great difficulty; and the vein, which at the beginning, was of the breadth of four feet, had in the progress contracted into four inches. Under these circumstances we desisted and carried the miners back to the Sault. What copper ore we had collected, we sent to England; but the next season we were informed that the partners there declined entering into further expenses. In the interim, we had carried the miners along the north shore as far as the river Pic, making, however, no discovery of importance. This year therefore, 1774, Mr. Baxter disposed of the sloop and other effects of the company, and paid its debts. The partners in England were his Royal Highness the Duke of Gloucester, Mr. Secretary Townshend, Sir Samuel Tutchet, baronet, Mr. Baxter, consul of the Empress of Russia, and Mr. Cruickshank: in America, Sir William Johnson, baronet, Mr. Bostwick, Mr. Baxter and myself. A charter had been petitioned for and obtained; but, owing to our ill success it was never taken from the seal office." Travels and Adventures in Canada, by Alexander Henry, pp. 234-5. This was no doubt the earliest attempt at mining made by white men on the Canadian shore of lake Superior.

river range and the magnetites of the Atik-okan. Both these are of immense extent; in fact the ore is in mountainous bodies, and millions of tons could be mined as in an open quarry. But for the present they lie far from railways, and the home market is only opening. Gold however is found more generally than any of the other metals. It has been discovered in the Sudbury district, in the townships along the valley of the Thessalon river, on the north shore of lake Superior, and in many places throughout that part of the Province which lies within the basin of Nelson river. This latter district embraces Lake of the Woods and Rainy lake and the territory drained by their tributary rivers, as well as a portion of the slope drained by the English river, and is 200 miles long by 100 broad. The discoveries made here within the last three years have raised great expectations, and some of the properties upon which development work has been done are confidently asserted to be rich and valuable. There are now six stamp mills in that country for treating gold ore, with an aggregate capacity of 60 stamps, and more are likely to go up this year if the needed capital is got. Those northern goldfields are certainly as well deserving of the attention of miners and capitalists as many in the United States, in Russia, or in Australia. But the production of bullion in large and paying quantities seems to be needed to establish confidence in them, and this work remains to be done.

Gold.

General Conclusions.

Enough has been said of the New Ontario as regards its extent, its physical characteristics and natural resources to prove that it is an important possession; and it is humbling to our pride as men of an enterprising and progressive race to confess that so little has been done to occupy and utilize it. Fifteen years ago (in 1881) it had seven organized municipalities, with a population as taken by the assessors of 4,765. In 1895 it had forty-eight municipalities, and a population of 36,000. This is some progress, but it ought to be far more. There are more men leaving our Province every year than is represented by the increase of those fourteen years, and it may well be doubted if they have gone to a better country for improving their circumstances. The two things most needed to open up the New Ontario are population and capital. British capital and emigration are turned towards the United States, in many parts of which a British citizen cannot hold a foot of ground in his own name; and towards the Transvaal, where he has no civil rights, and pays the great bulk of the taxes without even the privilege of educating his children in the schools in his own tongue. He could depend on getting fair treatment and the security of all the rights of citizenship if he came to the New Ontario instead, and he might find there scope for all his energies.

Little done to occupy and utilize our possession.

Slow growth of population.

Relative advantages of the New Ontario.

But it is an old saying that the gods help those who help themselves. If we take a proper interest in the north country ourselves we may do much to turn it to a good account. We do not lack for men or capital. Our men in

far too large numbers cross over to the United States to swell the population of that country. Much of our capital is in the banks. The official statement for the month ending 31st December last shows that there was deposited by the public in the chartered banks of Canada the very large sum of $187,119,573, whereof $119,667,176 is presumably drawing a low rate of interest, it may be 3 or possibly 3½ per cent., while $67,452,397 is at call, drawing none. There must be openings in the New Ontario for investing a portion of this capital with a chance of realizing good profits; and every investment of this nature THERE is patriotism, as well as enterprise and pluck; by which I mean a real investment, where there is some risk of loss as well as of gain, not a loan upon a gilt-edged mortgage. Ought not the policy to be, That we ourselves possess the land and win its wealth? A. B.

The policy for Ontario's citizens to pursue.

SECTION. V.

THE MINING SCHOOLS.

Keeping pace with the progress of mining operations in the Province, if not in the lead of such operations, the Mining Schools at Toronto and Kingston are being equipped and strengthened with a view to supplying the scientific and practical instruction upon which success in mining enterprises must always very largely depend. This Section of the report aims at giving an account of what is being done in this direction, not only as to the course of studies and the equipment of the schools, but also as to outside work of Summer Mining Schools and field prospecting with student classes.

The School of Practical Science.

Three-stamp test mill at the School of Practical Science.

For the purpose of making mill tests of about a ton of gold ore at a time, a three-stamp mill with a crusher of the Dodge pattern and a Frue vanner has been added to the School of Practical Science during the past year. Those interested in making thorough tests of any vein or deposit of gold ore will readily see the value of a mill test of this kind. In the first place, by taking quantities of a ton any chance mistake which might arise from relying on assays of small samples is absolutely precluded. Those who are familiar with mining operations can recall instances where considerable sums of money have been spent on the strength of one or more assays of samples picked from the surface. It is very easily possible also, in cases where the gold is coarse and not uniformly distributed, for assays to show nothing even although the ore might pay to work. Another point which is equally important to know is the way in which the gold occurs in the ore, that is, whether as free-milling or in concentrates, as this affects the cost of extraction and consequently the value of the ore. An assay of course only gives the total amount of gold in small sample, and not how it occurs; while panning is open to the objection that only small quantities of a very few pounds at most are taken. Usually it would be impossible to collect a ton of picked samples from any vein without doing a large amount of work. A thorough mill-test is therefore the investor's best safeguard.

Advantage of a mill test.

Arrangement of the mill.

With regard to the arrangement of the mill, as no provision was made for anything of the kind in building the school, the best use had to be made of the available space, and the mill planned to suit existing circumstances. As there was just enough room to allow sufficient fall for the pulp from the stamps over the vanner and down to the drain, the crusher had to be set up on the floor and the crushed ore hoisted by means of a friction pulley to the ore feeder.

Operations in treating the ore.

To follow the ore now in course of being treated, the first operation after any necessary sampling is done by spreading out on the concrete floor and

shovelling so as to mix thoroughly, is to put the ore through the crusher, the jaws of which can be set so as to crush to any desired fineness. This process is only a preliminary step to the fine stamping in the mortar. The crushed ore is then transferred to a bucket, weighed, and hoisted to the ore feeder, which holds about half a ton of ordinary ore. The jar of the stamps keeps the ore feeding slowly into the mortar as long as the stamps are working. The stamps are light, being the kind designed for prospecting, and weigh 225 lb. each. Inside the mortar are two copper plates, silvered on one side to facilitate the amalgamation with mercury; these inside plates catch most of the gold. The pulverized ore is carried through a fine screen by the water fed into the battery, and passed over another amalgamated plate which will take up any gold that may have escaped the inside plates. From this plate the pulp, which should now not contain any free gold, passes on to the distributing board of the vanner and is there spread out over the surface of the rubber belt uniformly. As the belt moves slowly forward and the pulp comes up to the clear water sprinkler, the lighter particles are washed down the belt, and the heavier particles such as iron pyrites, which might contain gold, stick to the belt and pass down underneath through a tank of water, where they are deposited. By this means both the amount and value of concentrates in a ton of ore can be determined. The tailings on the other hand pass down with the water over the tail of the vanner and are left in a tank. The water, after being cleared of anything that would settle, passes off into the drain. When the run is over the tailings can be taken out, dried, sampled carefully and assayed. This will determine the loss of gold.

Motive power.

The machinery is driven by a 6 k. w. constant potential motor supplied by 110 volt incandescent circuit of the city, and was made by the Canadian General Electric Co. at Peterboro'. The crusher, stamps, ore feeder and Frue vanner were supplied by Messrs. Fraser and Chalmers of Chicago.

Kingston School of Mining and Agriculture.

Summer School for teachers.

At the Kingston School of Mining and Agriculture a Summer School for the special benefit of teachers was held during the months of July and August. Seventeen took advantage of the courses in practical chemistry, chemical analysis, mineralogy, crystallography and assaying.

Field prospecting.

In September a field course in prospecting was organized, with the object of making the instruction in prospecting methods thoroughly practical. This was the first course of the kind given in Canada, and the class was limited to twelve. The expedition left Kingston with canoes and camp outfit per Kingston & Pembroke Railway on September 3rd. The canoes were launched in the Mississippi river at Snow Road station, and the party spent the next two weeks examining the mineral resources of the townships of Palmerston, Clarendon and Barrie. Samples of ore from a number of prospects in these townships had been treated at the stamp mill of the school, and it was interesting for the members of the party to see the modes of occurrence of these. A large number of specimens were collected and are now on exhibition at the

school. No systematic geological examination of this district has been made for over twenty years, although promising indications of the occurrence of gold and other metals have been found at a number of localities. The Frontenac county council have expressed the wish that a similar expedition be undertaken this autumn. After being two weeks in this quarter the party spent ten days in the district to the east of the railway, canoeing through Bobb's lake and the Tay river to Perth, thence through the Tay and Rideau canals to Kingston. In this district numerous iron, phosphate, mica and other deposits were examined, and specimens were collected for exhibition in the museum of the school. Some interesting rocks—one of which contains a considerable percentage of nickel—not hitherto reported from this part of Ontario were discovered. The material collected will be utilized to frame a report on the resources of the district. During the expedition each member of the party made a valuable collection of minerals, and gained experience not only in the field geology, but in what is not less valuable for the mineral hunter, rough prospecting methods such as portaging, canoeing and wood-craft. The canoes and camp outfit were supplied by the School. Each member was charged for his share of the incidental expenditure of the party, the total cost per man being $11.98.

Winter session.

On October 1st the third regular session of the School opened. The total number of students enrolled for the first term of the session was 163, showing an increase of 30 over the same time in the previous year.

Stamp Mill.

The mining laboratory or stamp mill has proved of great practical value to the Province. In all, thirteen lots of ore, varying in weight from 200 lb. to 6,000 lb. have been run through, sampled and assayed. In each case the concentrates, tailings and slimes were also sampled and assayed. The following is the list :

	Wt. of ore.
1. J. H. West, Yarker	600 lb.
2. E. S. Edmondson, Oshawa (crushed, sampled and assayed only).	200 "
3. Kaladar ore	6,000 "
4. Bonanza Gold Mining Co., Wahnapitae	4,000 "
5. " " "	4,000 "
6. T. McGown, Parry Sound	2,162 "
7. H. Roberts, Sharbot Lake	2,003 "
8. James Stark, Clarendon tp., Frontenac county	2,050 "
9. T. J. Hempton, Sharbot Lake	1,000 "
10. Crystal Gold Mining Co., Rathbun, Nipissing	1,990 "
11. Regina Gold Mine, Lake of the Woods	1,970 "
12. James McDonald, Mountain Grove, Olden	2,000 "
13. Damon Youmans, Mountain Grove, Frontenac Co.	2,000 "

Results of quartz milled and assayed at the School, published by permission :

No. 2. 200 lb. quartz from the Wahnapitae mine. Gold, 4 dwt. 16 grs. per ton of 2,000 lb., silver, 6 dwt. 10 grs. This ore is worth about $5 a ton.

No. 7. 2,003 lb. quartz from fifth concession, Oso township, Frontenac county, crushed, amalgamated and assayed. The yield of bullion was only trifling, and the ore and concentrates assayed only a small quantity of gold and silver.

No. 9. 1,000 lb. quartz from near Sharbot Lake, crushed, amalgamated and assayed. The yield of bullion was only a few cents. The ore assayed a trace of gold.

No. 10. 1,990 lb. quartz, crushed, amalgamated and assayed. The yield of bullion was 9 oz. 15 dwt. 9 grs., of value $19.50 an ounce. This is equal to a value of $191.44 a ton of

ore. The concentrates assayed in gold $38 a ton, and every 10¾ tons of ore yield a ton of concentrates. The assay of the ore showed 10 oz. 8 dwt. 17.76 grs. of gold to the ton, of value $205.73. This shows an extraction by the mill of over 93 per cent. of the assay value.

No. 12. 1,900 lb. of quartz from fourth concession, Olden township, Frontenac county, crushed and amalgamated. The yield of bullion was 4 dwt. 18.16 grains, of value $2.98, equal to $3.14 a ton. The assay of the ore showed a value in gold of $4.64 a ton. The difference between this and the bullion is found in the concentrates and tailings, the assays of which showed rather more than this difference, viz., concentrates, $0.15 per ton of ore, and tailings $2.06 per ton.

While the tests on these ores have, with a few exceptions, led to no positive results, yet the negative verdict has been of value. In most cases small picked samples had been assayed and reported as being rich in gold The mill tests have convinced those concerned that further investment would be at least hazardous.

Outside classes for prospectors.

Thanks to the liberality of the Government and Legislature in providing $1,000 for the work, classes were held between July and December in five important mining centres, as described in the report of Mr. William Hamilton Merritt, which is appended. The Board has received from four of these places requests to urge on the Government the importance of continuing the work and of providing at each place a cabinet of typical minerals for economic and educational purposes. Such cabinets would cost little, and once properly arranged local effort would be largely enlisted in adding to them. The Board commended this proposal to the consideration of the Government, and at the last session of the Legislature provision for the object was made by a grant of money.

Work in equipping the Mining School and Stamp Mill.

The Government and Legislature in the session of 1895 provided $4,070 for the purpose of equipping the Mining School and Stamp Mill, and the work was carried on during the summer under the personal supervision of the staff. The laboratories are now in excellent condition, and only a small supplementary grant is needed to complete the equipment of the Stamp Mill and the Petrographical Museum. A roasting furnace and chlorination plant is required for tests on refractory gold ores and for treating the concentrates from free milling ores; also an electric motor to run the Frue vanner and chlorination barrel. Experience has shown that the vanner does not do its best work when run rom the same shaft as the rest of the machinery, as it requires uniform speed.

REPORT ON THE PROSPECTORS' CLASSES.

The following report on the work of the prospectors' classes during the summer of last year was made by Mr. W. H. Merritt to the Board of Governors under date of January 2nd :

The pioneer class of 1894.

"The report which I had the honor to submit to you on the first outside prospectors' class, held at Marmora in the spring of 1894, was very brief, owing to the fact that the class was largely experimental in its character, and the experience derived from a single class was naturally limited.

Circumstances under which the work originated.

"During the present year I have by your instructions held five classes, and I am therefore able to report somewhat more fully on the subject. It may not be unbecoming if I draw your attention to the circumstances which

gave rise to this novel branch of instruction, and some reasons why it may be considered of importance to the Province.

"In 1889 the subject of mineral development was brought to the attention of the Ontario Government by the press. A Royal Commission was appointed to enquire into the subject. About this time an article in a mining journal on classes in mining centers in New Zealand attracted my attention, and I brought it to the attention of my colleagues on the Commission. Evidence was then collected from every part of the Province as to the desirability of prospectors' classes, and this evidence, together with extracts made by the secretary from the New Zealand reports, is to be found in the Report of the Royal Commission, which finally strongly recommended that somewhat similar classes should be held in this Province. No action was taken in this matter until you saw the desirability of giving this practical form of educational assistance to our prospectors, and instructed me to hold at Marmora the first class of this character attempted in Canada. The Government of Ontario has since provided the means for carrying on the classes more generally.

The New Zealand course.

"In New Zealand the instruction given at mining centers would from the reports appear more like that undertaken at Kingston in the winter two months' course. It seems that its object was largely to give instruction on the spot to miners and mine foremen with a view to qualify them to pass Government examinations. Nearly every Government exacts that men must hold certificates of competency before they can hold responsible positions in mines.

The objects to be aimed at n Ontario.

"In Ontario we are still in the prospecting stage. Therefore anything that can be done in the direction of assisting the prospector where best to search for, how to recognize, and the simplest field methods of testing minerals of economic value, would appear to be a matter of first-class moment to the Province. Indeed it might well be considered hardly second to the desirability of making the rough road of the prospector as easy as possible, by his being able to hold without expense (other than for development) what he finds, until he can investigate whether it is good, bad or indifferent. We have enormous areas of unprospected lands still in the Province, and the latent value of the largest proportion of them will only be determined by the hardy prospector. There are not many experienced prospectors in Ontario, but with the assistance of prospectors' classes and under the inducement of liberal mining laws their number would undoubtedly increase. As an example of a large body of men whose unquestionable ability and intelligence would render them prospectors of the highest order, I might mention the Ontario Land Surveyors, and suggest that a course such as the two months' winter course at Kingston be substituted for their nominal examination bearing on minerals, etc. Mineral investigation would be immensely assisted by additional knowledge acquired by this able body of men.

Classes at Mine Centre,

"The first prospectors' class commenced on July 15th at Mine Centre, a central point to the mining claims situated in the vicinity of Shoal lake, part of the Seine river system, Rainy River district. No notice had been received

of the intention to hold a class in this vicinity, but, notwithstanding this disadvantage, 44 in all attended the class. At Rat Portage the second class commenced August 12th; the number that attended the class there was 24 in all. The third class was held at Port Arthur commencing September 4th, and the total number attending the class there was 49 in all. The fourth class was commenced at Sault Ste. Marie on September 23rd, and 24 in all attended this class. The fifth class met at Sudbury on December 6th, regular work commenced on the 9th and concluded on the 23rd December. In all 13 attended this class.

Rat Portage, Port Arthur, Sault Ste. Marie and Sudbury.

"The total number attending these five prospectors' classes was 161 in all. This does not include those who were present at the public lecture which I usually gave before organizing the class, and which I delivered also at Fort Frances where no class was held.

"The attendance was as a rule irregular, and the majority only attended a few lectures between business engagements. In all cases however a certain number faithfully attended the practical work and lectures from start to finish, often spending the whole day at the work of testing samples, etc.

"The work was conducted on the same lines as the Marmora class (mentioned in detail in my last report) with slight modifications, based entirely on practical work, such as would be seen or carried on by the prospector in the field. In connection with these I had about half a ton in weight of specimens and apparatus.

"In the case of prospectors' classes my experience would indicate that it is only after years of experience among mines, miners and prospectors that that information can be acquired which is most desired by the man who has spent much of his life in practical work, perhaps in many fields.

"With reference to the most desirable time for holding prospectors' classes, my experience would lead me to think that for the towns the best time is in the spring before the snow goes off. The early winter does not appear to be much better than the summer, because the prospector is off to find work in the timber camps, the proceeds of which will grub-stake him the next season. In outlying mining camps, such as down on Seine river, fly-time is more apt to lead to a larger congregation of prospectors at the nearest town than at any other time of the year. If ample notice is given, good classes could then be organized at such places. At points where there is no mining excitement it is altogether advisable that a previous visit should be made to the place where the class is to be held, when possible; or that the matter be taken in hand by one or two gentlemen as a committee. As examples, Port Arthur had a very good, and Rat Portage a fair class after they had been visited, and gentlemen acted as committees; whereas at Sudbury, where mineral speculation is very quiet just now, no previous visit was made and no committee formed, and there the class was much smaller than at any other place.

Time for holding classes dependent upon circumstances.

"The labor and waste of time packing and unpacking is very great. Some boxes were made for rocks and minerals, and I would recommend that the present ones be strengthened and some others procured if the classes are to be continued.

Permanent collections suggested.

"I submit herewith addresses from the different classes. You will notice that at each central point the class desire to follow up their studies by having a permanent collection of rocks and minerals. The idea is to add to this locally and have a permanent collection which will be available for class work, for reference and comparison, and as an example of the mineral wealth of the district to capitalists who may come with a view to purchase mining property.

"A full list of the persons who attended some or all of the classes has been sent to the bursar. My best thanks are due to many of those gentlemen who attended the classes for assistance cheerfully given.

Local help and encouragement.

"The trustees of the Mining School at Port Arthur could not do enough to further the class, and the town councils of Rat Portage, Port Arthur and Sault Ste. Marie very kindly placed class-rooms at my disposal. In all places visited the proprietors of the local newspapers were extremely kind in doing everything possible to make the classes a success, and our best thanks are due them."

FIELD CLASS IN GEOLOGY AND PROSPECTING.

A class in field geology.

The following very interesting account of the field class of the Kingston School of Mining has been prepared at the request of the Bureau by Prof. W. G. Miller, who had charge of the excursion:

In September, 1895, the school organized a class in field geology and prospecting. The objects of the class were to give that knowledge of geology which cannot be obtained in the class-room or laboratory, to impart a training in rough prospecting methods and to make a somewhat more careful mineralogical and geological examination of the district visited than had previously been made.

On the Mississipi river.

It was decided to limit the party to twelve, and to first visit the district of the upper part of the Mississippi river. Accordingly, on the third of the month the party with a camp outfit and canoes left Kingston by the Kingston and Pembroke Railroad for Snow Road station. Here the canoes were launched and the work begun in the township of Palmerston. As the river here crosses the strike of the rocks, several portages were encountered, and as most of the party had had no experience in portaging and little in canoeing, slow progress was made. Farther up the river, in the townships of Clarendon and Barrie, the channel lies in the direction of the strike, and rapids are fewer. Between the head of Long lake and Mazinaw lake the river again crosses the strike, and the portages again become more numerous. In Palmerston only one metalliferous deposit was visited. This was situated about three-quarters of a mile west of the rapids known as the Ragged Chute.

Magnetite in granite.

It consisted of magnetite in granite, and appeared to be similar to some deposits of the same mineral in the eastern part of Hastings county, which have been described in a late report of the Geological Survey of Canada by Prof. T. D. Adams. This deposit was being opened up at the time of our visit, but the ore "in sight" did not warrant any further outlay of labour. Many of the coarser grained granites of Frontenac and Renfrew counties

contain large grains or lumps of this ore, but not in sufficient quantities to be of economic importance.

As to the geological features along the course of the river in the township mentioned, it may be said that the main part of the river here lies in a trough, the rocks of which are for the most part schists, including crystalline limestones. This trough is bounded on either side by rough, rocky country, the rocks of which are chiefly granitoid gneisses and granite. The rocks in the trough are now considered to belong to the uppermost part of the Laurentian, or to the Huronian. It is chiefly in this trough that the metalliferous minerals of the district have been found. These include galena, zinc blende, stibnite, meneghinite and native gold. The gold occurs in bedded veins, as in Hastings. The other minerals occur in the same form of deposit, and also in cavities in the crystalline limestone.

Geological features along the river.

Minerals, and how they occur.

Small strings of galena have been found in a number of places along the river in this rock, and many pits have been sunk in the vain hope that the deposits, according to the popular theory, would "get wider below." It was found that a great deal of labor and considerable capital had been expended on such deposits. In the eastern part of the district the people have also been deluded through the operations of a "divining rod man," who claims to be able to tell them by means of his instrument whether they have valuable minerals on their properties, the nature of the same, the depth they will have to go to find them, and the extent of the deposits. Several persons have been foolish enough to believe these statements and to expend considerable labor in the fruitless endeavor to find the hidden riches. This shows the need of a wider diffusion of a knowledge of the nature of minerals and rocks among people living in the mining districts of the Province, not necessarily that they may find valuable deposits, but to prevent their wasting time and money in places where there is no possibility of valuable minerals occurring.

Delusions of prospectors.

Numerous occurrences of metalliferous minerals were noted along the course of the river, but generally in small quantities. The rocks may be said to be comparatively highly impregnated with metalliferous matter, and there seems no reason why this matter should not have been segregated into lar e veins and that these may not occur in the district.

Bedded veins and

As stated above, the metalliferous veins are bedded veins, but in the township of Barrie several large quartz veins were examined which are fissure veins, cutting across the strike of the rocks. These however contained no metalliferous minerals, and appear to be of a different age from the bedded veirs.

fissure veins.

In the township of Barrie, along the shores of Long and Marble lakes, a large number of dark basic dikes were observed. Where these cut the crystalline limestone or marble they are among the finest of their kind to be seen anywhere. The dike rock weathers less easily than the enclosing material and stands out prominently from it. In the marble the contrast between the colors of the two rocks is striking, and serves to bring out very distinctly the relations between them. The occurrence of these numerous

Dikes in Barrie township.

dikes shows that the district has been subjected to considerable geological disturbance, and is not an unfavorable indication of the presence of mineral deposits.

Along Marble and Mazinaw lakes.

Above the Marble rapids, at the head of the lake of the same name, along both shores of Mazinaw lake, the rocks are chiefly gneiss and granite and form cliffs of considerable height. In some of the coarser grained granite dikes at the head of Mazinaw lake in Abinger, mica deposits have been opened. The fabulous Myers' cave is said to be situated near the foot of Marble lake, but no one knows out of which one of several caves the discoverer obtained the silver, concerning which so many wondrous tales have been told.

Mica and marble.

The marble of Barrie has long been known to be of good quality, but up to the present little use has been made of it.

Besides collecting specimens of the ores of the district, the members of the party secured a large number of specimens of minerals and rocks, but pressure of work during last winter has prevented any detailed examination of these in the laboratory.

East of the Kingston and Pembroke railroad.

Two weeks were spent in this district, and the following ten days were occupied in a trip to the east of the Kingston and Pembroke railroad. The party started from the head of Bobb's lake in the township of Bedford, thence by the Tay river to Perth, and the Tay and the Rideau canals to Kingston. Along this route the important mineral deposits were visited and specimens collected for future examination in the laboratory. The deposits visited consisted of mica, phosphate and iron. None of them are being worked at present, and all have been described in the reports of the Geological Survey of Canada and elsewhere. Numerous specimens of rocks were collected with the intention of examining them chemically and microscopically for the presence of substances not heretofore found in the district.

Mica, phosphate and iron deposits.

Nickel in a dike rock.

In the townships of Leeds and Storrington a number of basic dikes were observed. A specimen from one of these, which is basalt-like in appearance, gave Mr. R. W. Brock on a preliminary analysis over one-half of one per cent. of nickel, a higher percentage of this metal, it is believed, than has been found in a dike rock from any other part of the world. This rock fuses readily, and there is little difficulty in separating the metal from it. Since rocks of this class contain several per cent. of iron, and nickel may replace the iron in different amounts, it would appear that a chemical examination of all such rocks is desirable.

Cost of the outing, and its practical advantages.

The cost per man per day during the trip was less than fifty cents. It is believed that such classes supply a need in training men in prospecting and exploring methods, and in imparting knowledge to them which cannot be otherwise obtained. Several of the larger scentific institutions in the United States and Europe have summer classes in geology, but these are much more expensive for the student, and in them he does not gain that knowledge of woodcraft and exploring methods which is so necessary to the prospector in new countries.

SECTION VI.

WORK WITH THE DIAMOND DRILL.

What the drill enables the miner and prospector to find out, expeditiously and at relatively small cost.

One of the most important aids to mining yet invented is the diamond drill, which has been widely adopted since its invention by Hermann in 1854, and is now in almost universal use. Its value consists in the opportunity which it gives the miner at a minimum expense of actually seeing and handling a section of the material whose character it is all-important for him to ascertain, yet which is concealed from his gaze by a covering usually of rock, scores, perhaps hundreds of feet in thickness. This the diamond drill enables him to do without sinking shafts or excavating drifts and tunnels which after all might turn out to be so much time and money wasted. It is equally of service in testing new ground and in exploring for bodies of ore in working mines. By its means the prospector may satisfy himself at a comparatively small cost whether the property he is investigating contains ore sufficient in quality and quantity to warrant regular mining operations. If he finds that it does, he knows beyond peradventure where to sink his shafts and how to lay out the work to be done; if it does not, he is saved further trouble and loss. The mining manager is enabled on the one hand to locate masses of ore in advance of actual drifting, and on the other to prove what parts of his territory are dead ground from which no returns can be hoped, and so to conduct his operations in either case intelligently and economically. In almost every large mine diamond drills for exploratory work are part of the regular plant, and are constantly in operation. There can be no guess work as to the strata penetrated by the drill; the cores brought to the surface speak for themselves, and, what is no small advantage, supply samples large enough for detailed examination and analysis. The only point open to question is whether the cores themselves are thoroughly representative of the strata or deposits from which they are taken. As to this, in the matter of gold ore for instance, there is sometimes room for doubt. The drill may pierce a rich pocket in a gold vein and so bring up a core showing a value quite out of proportion to the average contents of the vein, or it may run through a barren stretch and exhibit a core altogether worthless, producing a record in the one case unduly flattering and in the other unjustly condemnatory of the property. Such results however are only to be feared where variable and irregular deposits—as gold veins are occasionally found to be—are being examined by the drill, or where an adequate number of bore-holes has not been made. This drawback is absent where strata possessing regularity and continuity, or large bodies of ore or mineral, such as deposits of iron, copper, nickel, beds of lithographic stone or marble, or similar masses are being examined.

But not an inerrant guide.

The general principles of construction and operation.

There are various makes of diamond drills, but the principles on which they are constructed are substantially the same in all. The boring tool is an annular steel bit set with diamonds, which is attached to the end of a series of

hollow rods, and being rotated under pressure cuts away the rock upon which it bears, the core rising up in the hollow of the rods, or rather in the core barrel which forms their lowest section, and is held when required to be lifted by a split ring in the bottom of the section. As the hole is cut down additional lengths of pipe are screwed on, and when it is desired to bring the core to the surface the rods are raised and the core is taken out. In this way a continuous section of the ground from the time the drill enters solid rock can be obtained, the boring capacity of the machines varying from a few hundred up to two thousand feet. Some of the smaller drills are made to work by hand, but the majority are operated by steam power, or in underground workings by compressed air. For surface work the engine is usually attached to the drill, both being mounted on a wagon for convenience of transport. The boiler for the same reason is also set on wheels. A supply of water is essential to the working of the diamond drill, and a steam pump forms part of the outfit, the duty of which is to send a constant stream through the rods down to the bottom of the hole where the bit is at work and so bring the cuttings to the surface by means of the ascending current, which comes up between the rods and the casing or walls of the hole. It may occasionally happen that in porous or broken rock some fissures or jointing afford the water a subterranean passage, and it is "lost," or ceases coming to the surface. This is far from a desirable state of affairs, and it is necessary for the driller to recover the water. He usually seeks to do so by sending down to the bottom of the hole a supply of cement sufficient when hardened to stop the leak. In some cases bran or similar material is resorted to. Besides bringing the cuttings to the surface, and so keeping the drill runner constantly informed of the nature of the ground being passed through, the "wash" water indicates by its flowing freely or scantily the favorable or unfavorable progress of the work at the bottom of the hole.

The diamonds or carbons, and whence their supply comes.

An important part of a diamond drill outfit, and one which enters largely both into its first cost and the expense of operating it, is the diamonds, or carbons, as they are also called. They are veritable diamonds, procured mainly from Brazil, and are of precisely the same chemical composition as the white and more highly priced gems used for jewelry and ornamental purposes, differing only in color. They are black, or nearly so in shade, occasionally of a reddish tinge, and are found in various sizes. A stone recently got in the old diamond district of Brazil weighs 3,100 carats, and is by far the largest diamond ever known. It is now in the hands of the jewelry firm of Messrs. Kahn & Co. of Paris, and the government of Brazil is negotiating to purchase it for the national museum of that country. Uncertainty as to how so unusually large a stone would turn out has made the dealers somewhat chary of handling it, and the price demanded is considered too great. The probable value was given last year as about $40,000, or 52 shillings 6d. per carat. When stones are found of larger size than can be conveniently used in the diamond drill, they are broken into pieces of about two carats weight, which is the size ordinarily employed. They are of a hardness quite equal to that of the white or colorless variety, and as the abrading action is largely done by the edges and angles of the stones, there is room for considerable skill on the

part of the operator in setting the diamonds so that they may do the greatest amount of work with the minimum of loss. The price of black diamonds fluctuates a good deal according to the conditions of supply and demand, and also to the ability of the combinations which control the black diamond mines to rule the market. In the summer of 1894, when the Department purchased the diamond drill plant, the market price was $17 per carat, and at that time and a little later a supply of diamonds was laid in amounting to 82.605 carats at a cost of $1,356.16, or an average price of $16.40 per carat. In the autumn of 1895 the market advanced to $19 per carat, and again in the following November to $21 per carat. An exceedingly brisk demand set in from the South African gold fields, and in January, 1895, the price rose to $25 per carat, in March to $30, and in April to $36, by far the highest price ever known. Almost the whole production of black diamonds at the present time can find ready sale in South Africa.

How prices are regulated

The practice in operating a drill is to keep a sufficient supply of diamonds on hand for at least two bits, so that one may be set while the other is in use. Usually eight stones are set in the bit. Some are placed directly on the face of the bit, some are made to project a fractional part of an inch on the outside of it, and some to project similarly on the inside, the object being to cut an annular ring out of the rock a little greater in width than the bit itself, thus allowing the latter and the rods to which it is attached free play. If for any reason it is desired to enlarge the diameter of the hole after it is put down a "reaming" bit is employed, in which the diamonds are set wholly on the outside. The wear on the diamonds varies greatly according to the hardness and compactness of the rock which is being drilled. In comparatively soft rocks such as limestone, slate or shale, the loss is insignificant, while in such material as quartz, diorite or granite, it is very much greater. In the same way, the rate of boring varies widely. Where the rock is solid and not too hard, a hole may be put down 30 or 40 feet in a day of ten hours, but where greater resistance is met and drilling operations are interfered with by seams and fissures, perhaps the utmost diligence on the part of the drill runner will not suffice to gain more than 3 or 4 feet in the same time.

Setting the bit,

and wear of the diamonds

Numerous difficulties are likely to present themselves to the operator of a diamond drill plant, and, as his work is so largely hidden from view, only native ingenuity and skill born of experience can enable him to overcome them. The following extract from an excellent article in a recent number of the Engineering Magazine of New York deals with this practical aspect of diamond drill work:

Practical aspect of diamond drill work.

"The mishaps that may occur in drilling are many. The most common is the parting of the rods while in a hole. This may come from a fracture of the rods, the stripping of a thread, or the unscrewing of a coupling. The last is more liable to occur when pulling the rods than at any other time, and may result in smashing a set of stones. If rods are simply uncoupled, they can usually be caught by gently lowering and entering the top piece, and turning it to the right. In cases of fractures various sizes of inside and outside recovery taps are provided. The writer once spent two days in recovering a bit in a flat hole where the core shell had twisted off at the core lifter

Mishaps that may occur.

ring and left the ring in the lower half of the shell. The recovery tap entered the ring, which was so hard that the tap would not catch it, and yet it would twirl round with the tap, preventing the tap from advancing and catching the inside of the shell. After cutting several portions from the end of the tap, it finally caught the top of the broken shell with one thread and pulled it out.

"When casing or rods are fast in a hole near the bottom, that portion above the obstruction can be removed with a left hand tap. In using left-handed taps the right-handed rods must be pinned at their joints to prevent unscrewing. Fishing for broken rods is much complicated in cases where the ground is soft or caving, and large chambers have been washed out in which the end of the rod may rest and the tap pass by it. It sometimes happens that a diamond is wrenched loose from its setting and remains at the bottom of the hole, either unbroken or in several fragments, when the rods are withdrawn. In cases of this kind the bottom of the hole should be cleaned out by a mass of soap or wax attached to the end of the rods and lowered in the hole. The fragments of rock and carbon will adhere to the sticky material when it is withdrawn. If caving ground catches the rods above the bit they may be released by drilling down a casing outside of the rods and cutting away the bound rod with a steel rose bit.

"Overcoming difficulties at the bottom of a deep hole will tax the ingenuity of a good runner and show his capacity. No man should undertake a deep hole—one over 750 feet—who has not had a good experince with shallow holes."[1]

Keeping a record of borings.

Where the object of drilling is to determine the presence and situation of bodies of ore, it is essential that a record of the borings should be systematically kept. For this purpose the cores as they are brought up should be carefully laid away for reference and examination, which is usually done by placing them in shallow boxes not much exceeding in depth the diameter of the core, a foot or so in width and eight or ten feet long. The various sections of the core should be divided from one another by longitudinal strips of wood, and should be labelled with the number of the hole and depth from which they are taken. The drill manager should also keep a daily record of the work done by the drill, and note all items of interest, causes of delay, etc., from which he should make daily or weekly reports of progress to his employers.

The tendency of drill holes to deflection from a straight line.

A curious fact in connection with diamond drill holes is that they tend to vary from the direction in which they are begun. Vertical holes are liable to take a spiral course, due probably to the fact that there is a natural inclination on the part of the suspended rod to describe an eccentric curve with the free end at the bottom of the hole. Inclined and horizontal holes will also be deflected more or less, according to the nature of the ground and the condition of the boring tools. A case was noted at one of the Cliff shafts in Ishpeming, Mich., where a vertically-started hole at a depth of about 400

[1] Prospecting with the Diamond Drill, by J. Parke Channing, in the Engineering Magazine for March, 1896, p. 1085-6.

feet was some fifteen or twenty feet out of plumb. At the Scotchman's United mine, Victoria, a diamond drill hole 370 feet deep was deflected thirty-seven feet three inches. At the Oriental Company's mine a hole 425 feet deep was sixty feet nine inches out of its proper course. Nine holes were drilled in Michigan by Mr. Channing, the writer mentioned above, at angles varying from fifteen to sixty degrees from the horizontal, and the variations at the bottom were from eleven and a half to forty-two degrees. It was invariably found that this variation was in the line of flattening. Captain Peter Pascoe, of the Republic iron mine, reported that in his mine "horizontal holes invariably raised as they gained in length." The rods and core barrel lie on the lower side of the hole, while the bit fills the end. This causes the line of boring at any period to make an angle with the axis of the hole in which the tool is rotating, thus making the line of advance an upward curve.[2] In estimating the results of boring by the diamond drill, this deflection should be taken into account.

Circumstances which influence the cost of work.

The cost of work with the diamond drill depends to a very large extent upon the nature of the rock strata penetrated, being greater in hard and broken, and less in softer and more compact rocks. Distance from means of communication and transport is also an item of importance. It frequently happens that operations are carried on in some remote spot where the roads are bad and where supplies of any kind are hard to get. Under such circumstances the cost is somewhat increased both on account of the difficulty in hauling in the plant, and the necessity for starting a camp for the accommodation of the men engaged on the drill.

The Ontario Government's Drill.

The Ontario Government's drill.

In 1894 the Legislature of Ontario passed an Act relating to Mines and Mining Lands which provided among other things for the purchase by the Government of two diamond drills to be used in the exploratory drilling of ores or minerals in the Province, and in the same session the sum of $15,000 was appropriated to carry out the provisions of the Act. Only one drill has yet been bought, the preference being given after careful investigation to the machine manufactured by the Sullivan Machine Company of Claremont, N. H., and Chicago. A drill of the "C" class made by this company was purchased in August, 1894, at a cost, including certain extra equipment, of $3,611. A 15-horse power boiler mounted on wheels, and a duplex pump, both of Canadian manufacture, together with the customs duty paid on the drill, brought the total cost of the outfit up to $4,275. By the tariff law of Canada diamond drills for mining purposes are admitted free, but the operation of a law depends a good deal upon the interpretation of it. The view was taken by the customs authorities at Toronto that the diamond drill—and consequently the only part of the machine entitled to free admission—was the bit in which the diamonds are set, a circular piece of steel perhaps a half pound in weight. All other portions, including the framework, gearing,

[2] Ibid, pp. 1087-9.

pulleys, etc., were classed as "motive power," and so chargeable with a duty of 15 to 35 per cent. ad valorem, amounting to $350.41 in all. Duty on this basis had to be paid before the drill could be released from bond. On reconsideration of the matter however the Department at Ottawa refunded $230.90 of the amount, leaving the net duty on the machine $119.51. The drill has a capacity to bore 1,200 to 1,500 feet in depth, and takes out a core one and three-sixteenths inches in diameter. It has proven itself a serviceable and satisfactory machine. Certain parts, such as bits, core lifters, etc., are subject to severe wear and tear, and frequently require to be replaced, but as duplicates can be quickly procured from the Company's works at Chicago, where they are kept constantly in stock, no delay or interruption of the work need arise from this cause.

Regulations governing the control and management of the drill.

The regulations governing the control and management of the drill, as approved by His Honor the Lieutenant-Governor in Council, September 15 1894, and amended by Order in Council, April 9, 1896, provide that it may be supplied to owners of mineral property or others desiring its services upon their furnishing a bond for payment of the costs and charges of working it, including freight, fuel, labor, etc. In order however to encourage the opening up of properties by means of the drill, the Bureau of Mines undertakes to bear 45 per cent. of these charges in 1896 and 1897, leaving the party employing the drill to pay the remainder, or 55 per cent. only. In 1894 and 1895 the proportion payable by the Bureau was 50 per cent., and from 1898 to 1900 inclusive it will be 35 per cent. The Government supplies a mechanical manager of the drill and a fireman, the former being paid at the rate of $1,000 per annum while the drill is at work, and the latter $500. The only additional labor required is the help of a workingman to cut wood, assist in moving the drill, etc. The present manager is Mr. W. W. Roche, an experienced drill operator and miner. Mr. Roche is quite capable of selecting the sites for borings on any location, but the practice hitherto pursued, which is the most satisfactory to both parties, is for the owner of the property to employ an engineer or expert to consult and advise with the manager in the location of the holes, the angle at which they should be bored, etc. It is easily seen that the successful and economic defining of a vein or body of ore depends very largely upon the judicious choice of sites for the borings, the inclination at which they should be made, and the depth to which they should be carried. In deciding upon these points, the skill and experience of the trained miner are most valuable, but they lose nothing of their worth in being reinforced by the conclusions of a competent engineer carefully formed upon the spot. An extra charge of $50 per month is provided for when the services of the drill are retained after the property has been shown by means of the drill to be valuable for its mineral. Provision is made whereby the cores and cuttings from any property shall not be exhibited to any unauthorized person, or information acquired during the working imparted to anyone not entitled to receive the same.

EXPLORING THE GLENDOWER IRON MINE.

Exploration of the Glendower iron mine in Frontenac.

The first property on which the diamond drill was employed was the Glendower iron mine, situated on lots 6 in the second and third concessions of the township of Bedford, in the county of Frontenac, on the shore of Thirty Island lake, and is connected with the Kingston and Pembroke Railway by a spur about four miles in length. It is the property of Mr. Joseph Bawden, barrister, and Messrs. Folger Bros., of Kingston. The ore body, where exposed, has a width of about 20 feet. It occurs in metamorphic rocks which have a strike about northeast and southwest, and dip at an angle of over 80 degrees. The rock on the upper side of the deposit is crystalline limestone, while that on the lower has been described as hornblende schist. The ore itself is a coarse magnetite, and in places is well crystallized and shows a well defined parting. Mixed with the ore there is considerable hornblende in large pieces. The mine was opened in 1873, and about 12,000 tons of good ore were raised and taken to the United States. Operations were then suspended, but were afterwards resumed by another company, and carried on upon an extensive scale for four or five years. It is estimated that about 75,000 tons of ore in all were taken out of the mine.[4] At a depth of about 180 feet considerable sulphur was encountered in the ore, and work was discontinued. Some drilling was done, 300 or 400 feet in all, and it is said that good ore was again obtained. The object of the work undertaken by means of the Government drill was to test the correctness of this statement and to ascertain whether the quality of the ore in the lower portions of the deposit was good enough to warrant the re-opening of the mine. The deposit has been traced on the surface for a distance of 1,134 feet.

Details of the borings.

Work was begun with the drill on 10th November, 1894, at a point about 75 feet south of the old workings, the hole looking to the west and being pitched at an angle of 80 degrees. Crystalline limestone, hornblende, granite and quartz were successively pierced to a depth of 182 feet 6 inches,

[3] The Glendower Iron Deposit, by Mr W. G. Miller. B.A., in Journal of Ontario Mining Institue for 1894-5 (p. 61). Mr. Miller discusses the probable origin of this deposit. He says (pp. 62-3): "The magnetite may have been produced through the metamorphism of limonite beds, although the form which the layer of sulphuretted ore takes in the deposit does not seem to point to this mode of origin. The sulphur layer is in a direction transverse to the dip of the deposit, while if the deposit had had a sedimentary origin we would expect this layer to lie in the direction of the dip. . . . From some characters of the hornblende rock on the lower side of the Glendower deposit, it seems possible that the ore may have been derived from this rock by a process of leaching or segregation in solution. The components of the rock in portions of the drill core examined microscopically are essentially pyroxene, which in some of the thin sections examined is seen to be almost completely altered into hornblende, while in others it is quite fresh, and scapolite, with in places a considerable amount of calcite. Large pieces of hornblende are found scattered through the ore, a fact which seems to point to the presence of hornblende in the source from which the iron was derived. The ore, if we accept the view that it has been formed by segregation in solution, was formed in a line of weakness between the limestone on one side and the hornblende rock on the other, and the iron was dissolved out of the latter by water more or less heated percolating through it. Along the line of weakness there would be more chance for the matter carried in solution to become oxidized, and the result would be that the iron which had been dissolved out and put into solution by carbonic acid or other acids or alkalies would be precipitated in the opening and take the place, to a certain extent, of the calcium carbonate which would be dissolved in its stead. This latter material would be carried through by the percolating water and deposited, on the solution becoming concentrated, in the adjoining rocks, where there was little or no oxidation taking place. Thus it is that we find the hornblende rock filled with granules of this secondary calcite. It seems to me, taking all the characters of the ore body into consideration, that the magnetite has originated by this process of segregation from the adjoining rock, although the question needs more careful study than I have been able to give it. This theory will account for the position the sulphuretted band is said to occupy."

[4] Michael Grady, in Report of Commission on Mineral Resources of Ontario, p. 136.

when the large drift from the old shaft was struck and the hole abandoned. For the second prospect the drill was removed to a distance of 100 feet west of the old workings, and the hole bored at an angle of 75 degrees pointing to the southeast. The depth reached was 702 feet, but as the angle of dip of the vein nearly coincided with that of the boring, and was in the same direction, the ore body was not struck. The drill was then placed 213 feet south of the main shaft and 100 feet east of the ore formation, the hole being drilled at an angle of 70 degrees pointing to the north. At a distance of 197 feet from the surface the ore formation was struck and drilled through for 83 feet, the hole being finished at a depth of 380 feet. The fourth hole was put down on the same site, the feed screw being lowered and the angle changed to one of 78 degrees. At a depth of 270 feet the ore formation was struck and drilled through for a distance of 125 feet. For No. 5 prospect the drill was kept in the same place, but turned about 10 degrees more to the northwest. The hole was bored at the same angle and in the same general direction as the last, and the ore body was again encountered at a depth of 295 feet. The drillings showed mixed ore from 295 to 340 feet, 25 feet of good ore to 370 feet, and mixed ore from 370 to 430 feet. The hole ended in granite at a depth of 450 feet. The drill was now moved 171 feet south from the site of prospect No. 5 and 100 feet east of the vein. The hole was drilled at an angle of 85 degrees, and limestone was chiefly gone through for a distance of 425 feet, when the ore body was struck. The borings showed the vein to be 30 feet thick at this point. This hole was finished in quartz on 17th June, 1895, at a depth of 525 feet. The aggregate depth of the six borings was 2,626½ feet, and the time consumed was 180 days of actual boring, or at the rate of 14½ feet per day. The rock formations pierced were limestone and granite, with bands of hornblende and quartz. In some places the strata were found to be more or less broken up and obstructive to the drill, but on the whole the ground, especially the limestone, was easily drilled through, and good progress was made, the drill frequently going as much as 30 feet in a day. In hole No. 3, on January 23rd, 24th and 25th, it made 31, 42 and 35 feet respectively. The result of the operations was to show that a very considerable body of good ore existed between masses of mixed ore.

Cost of work at Glendower.

The total cost of the work was $2,591.18, or $0.986 per foot of boring. The various items of expense were as follows :

Services.	Total cost.	Cost per foot.
	$ c.	$
Freight	63 58	0 0242
Lumber, hardware and other supplies	162 24	0.0615
Wood	308 07	0.1173
Teaming and labor	393 72	0.1500
Repairs and renewals	81 95	0.0312
Diamonds	494 34	0.1882
Fireman	354 72	0.1350
Superintendence	732 56	0.2786
Total	2,591 18	0.09860

Of the gross cost 50 per cent. or $1,295.59 was charged to the owners of the property, the remainder being the proportion borne by the Bureau of Mines in accordance with the regulations. The proprietors' share of the expense represented a cost of $0.493 per foot of boring. The total weight of diamonds used was 28.428 carats, worth as stated above, $494.34.

EXPLORING A GOLD PROPERTY.

The Bonanza Nickel Mining Company's gold location, near lake Wahnapitæ.

After work was concluded at the Glendower mine the drill was removed to lot number 2 in the fourth concession of the township of Maclennan, near lake Wahnapitæ, the property of the Bonanza Nickel Mining Company. On this location a white quartz vein 60 feet in width, called the 'Mammoth' mine, had been discovered, which though carrying no visible gold had shown by assays a value of as high as $100 per ton. The drill was got to the spot with some difficulty owing to the rough country through which it had to be taken from the railway station, a distance of 15 miles, and was first placed about 70 feet from the foot wall side of the vein, the hole being made at an angle pointing 60 degrees to the south. The conditions were found to be very different from those at Glendower. The hardest kind of granite was encountered for a distance of 138 feet, when the quartz was struck and drilled through a distance of 65 feet, showing the vein to be 32 feet wide at this point, the hole ending in the hanging wall at a total depth of 205 feet. The drill manager reports: "I might here mention that this was a very difficult prospect to bore. The rock, which was the hardest of granite, had to be drilled through with great care on account of the hole being pitched on nearly the same angle and dip as the formation, the bit continually running into hard seams and the cores binding in the core shell. It was even worse when we struck the quartz, as there were so many vugs in the vein, and in these vugs were loose, hard crystals of quartz, which coming in contact with the bit were liable to break the diamonds. Still I managed with great care to drill through and determine the thickness of the vein." The second prospect was located on the line of the vein 350 feet southeast of the first, the drill being placed 38 feet south of the foot wall, and the hole pitched at an angle of 78 degrees pointing to the north. The drilling was begun in quartz and continued in quartz and spar for 29 feet, when the syenite or hanging wall was struck. The water was also lost at this depth, and under instructions from the company's manager the drilling was continued without cementing the crevice through a mixture of syenite, quartz and granite, the prospect being finished in granite at a depth of 91 feet. The frost setting in severely, and the company not wishing to do more work, operations were discontinued.

Cost of the work at the Mammoth mine.

The quartz, granite and syenite penetrated by the drill afforded the most difficult sort of boring. The rate of progress was consequently slow, and the cost per foot between four and five times as high as at the Glendower mine. The loss in weight of diamonds was 23.070 carats, and the cost of this item per foot of boring was upwards of seven times as great as at Glendower,

showing conclusively the obdurate nature of the strata pierced. Following is a statement in detail of the cost of work on this property:

Services.	Total cost.	Cost per foot.
	$ c.	$
Freight	66 70	0.2253
Labor and teaming	109 87	0.3712
Wood	111 82	0.3778
Lumber and drill supplies	43 00	0.1452
Renewals and repairs	118 35	0.4000
Diamonds	403 72	1.3639
Fireman	141 49	0 4780
Superintendence	284 47	0 9610
Total	1,279 42	4.3224

The cost charged to the company was $639.71, or $2.161 per foot, the remainder under the conditions governing the use of the drill being borne by the Bureau of Mines. The drill was at work on this property from 5th August to 23rd October, 1895, 69 working days, boring a depth of 296 feet in all, the average rate of progress per day being 4 feet 3 inches.

AVERAGING THE OPERATIONS.

Aggregates and averages of the drill's record.

Combining the operations of the drill at both places, it is found that a total depth of 2,922½ feet, in eight holes, has been bored by the machine since it was placed in the field, in 249 days' actual work, at an aggregate cost of $3,870.60, or $1.324 per foot. Of this $1,935.30 was charged to the owners of the properties, the average cost to them being thus $0.662 per foot. Following are the items of cost:

Services.	Total cost.	Cost per foot.
	$ c.	$
Freight	130 28	0.0446
Labor and teaming	503 59	0.1723
Wood	419 89	0.1437
Lumber and drill supplies	205 24	0.0701
Renewals and repairs	200 30	0.0685
Diamonds	898 06	0.3072
Fireman	496 21	0.1700
Superintendence	1,017 03	0.3476
Total	3,870 60	1.3240

Comparisons with records elsewhere.

For purposes of comparison, samples from actual experience have been procured, showing the cost of boring with diamond drills under like circumstances elsewhere. It is true that differences in the cost of labor, transportation, fuel, and especially in the hardness of the rocks through which the borings are made, are likely to make such comparisons of doubtful value unless these differences are taken into account. Nevertheless the figures given above for the working of the Government diamond drill will on the whole compare very favorably with those for operations carried on in other countries under conditions as nearly alike as can be obtained. In the New York Engineering and Mining Journal of September 22 and 29, 1894, details are given of the cost per foot of boring nine holes on one of the iron ranges in

Michigan, the aggregate depth being 2,091 feet. The total cost in this case was $2.374 per foot, as compared with $0.986 per foot with the Government drill at Glendower. No particulars are given however as to the character of the rock penetrated on the Michigan property. The items at the latter place are as follows:

Upon iron ore properties in Michigan and

Services.	Cost per foot.
	$
Labor on drill	0.606
Fireman	0.206
Fuel	0 182
Camp account	0 722
Repairs on drill, bits, core barrels, etc	0.126
Repairs on boiler and machinery and sundry supplies	0.097
Carbons	0.239
Superintendence	0.196
Total	2.374

In the article quoted above (pp. 223-4) Mr. Channing gives details of the cost of boring 18 holes to a total depth of 5,046 feet in iron ore properties at various places in Michigan. His figures are summarized as follows:

Services.	Total cost.	Cost per foot.
	$ c.	$
Labor on drills	3,580 27	0 709
Firemen	1,387 24	0.275
Chopping wood	1,266 01	0 251
Camp account	3,208 44	0 636
Bits and repairs on drills	585 47	0.116
Supplies and repairs on machinery	440 51	0 088
Carbons	1,660 97	0.330
Superintendence	1,006 38	0.199
Total	13,135 29	2.604

The material encountered in the holes consisted of iron slates, diorites jasper, quartzite, etc.

In the same article the expense of operations conducted by Mr. E. J. Longyear of Hibbing, Minn., comprising twenty-one holes and an aggregate depth of 4,684 feet is given. The figures are as follows: Minnesota.

Services.	Total cost.	Cost per foot.
Labor	$5,569 74	$1.189
Fuel at boiler	735 97	.157
Camp account	2,416 49	.516
Bits and repairs on drills	722 24	.154
Supplies, boiler and pump repairs	226 28	.048
Carbons	3,201 09	.684
Superintendence	1,211 51	.259
Total	$14,083 32	$3.007

The strata passed through consisted of jasper, iron slates, sandstone, and marble.

In the East New York mine at Ishpeming, Mich., twenty-eight holes were bored to a depth of 3,746 feet, of which 193 feet were in hematite, 646 feet in jasper, 986 feet in mixed ore and 1,921 in dioritic schist. The record of cost as given by Mr. Channing is as follows :

Cost of underground drillings.

Services.		Total cost.	Cost per foot.
400¾ days' setter at $3 00	$1,200 75		
372 " runner at 2 25	837 00		
230¼ " " 2 00	460 50		
4½ " laborer at 1 75	7 85		
		$2,506 10	$0.669
Carbons, 68⅝ carats at $15.144		1,035 47	.276
Bits, lifters, shells, barrels and repairs		433 81	.115
Oil, candles, waste and supplies		128 09	.035
Estimated cost compressed air		374 60	.100
Total		$4,478 07	$1.195

Two instances of underground drilling are given in the same article, in both of which the cost was much less than in the operations conducted from the surface. The first is from the records of the Minnesota Iron Company, and covers a period of twenty months from May 1, 1894, to December 31, 1895.

Services.	Total cost.	Cost per foot.
No. of feet drilled, 13,512		
Carbons	$4,587 82	$0.340
Supplies and oils	939 84	0.070
Fuel	547 39	0.040
Shop labor and material	679 01	0.050
Pay roll	3,694 83	0.273
Total	10,448 89	$0.773

This drilling was all done in the back stopes, almost every foot being in the ore. The drills used were the Sullivan make, "E" size, the holes being one and a half inches in diameter and from ten to forty feet deep, the machines being operated by compressed air.

The second instance is from work done at the Cleveland mine, Ishpeming, Mich., in 1892. It consisted of 6,075 feet of underground drilling and 1,414 feet of surface drilling with 470 feet of standpipe sunk.

Services.	Total cost.	Cost per foot.
Carbon	$1,887 00	$0.237
Supplies and oils	134 13	.017
Fuel	360 73	.045
Shop material, etc	663 36	.083
Pay roll	4,000 03	.502
Total	$7,045 25	$0.884[5]

[5]The Engineering Magazine, March, 1896, pp. 1091-2.

The last two tables are given in order to show the cost of exploring for ore bodies in working mines, but they are not strictly comparable with the cost of work done by the Government drill, or with surface operations generally, as the latter embraces items of expense, such as freight and teaming, which are absent in the former case.

BORINGS IN AUSTRALIA.

Government drills in New South Wales.

The Government of New South Wales, Australia, employs diamond drills for exploring purposes, the cost apparently being divided between the Government and the property owner. In 1894 the total depth bored was 557 feet, and the cost for boring, exclusive of reaming, was £468 2s., or 16s. 9½d. per foot, equal to $4.07 of our money. This cost seems large, and may be partly accounted for by the small extent of boring. In 1893 the depth drilled was 1,903 feet 7 inches, at a cost of 12s. 4⅞d. per foot, equal to $3.01 per foot. The rate of boring in 1894 was 12.55 inches per hour, and the diameter of the bore was four inches, much larger than that of the Ontario drill. The expenditure for diamonds was 9d. per foot—almost exactly the same as at the Glendower mine—and the work appears to have been done in basalt interbedded in clay. In 1893 the cost for diamonds was 3s. 3⅛d. per foot, more than four times as great as in 1894. The reason for this difference is not explained.

In Victoria.

In the colony of Victoria extensive borings have also been carried on by the Department of Mines for several years in search of auriferous deposits and in prospecting for coal. The aggregate depth bored for gold in 1894 was 28,347 feet 9 inches, and the total cost £10,663 12s. 9d. Of this distance 21,148 feet 11 inches was put down by means of diamond drills at a cost of £9,673 17s. 6d., or 14s. 3¼d. per foot, equal to $3.47 per foot. Other boring machines on contract drilled 7,198 feet 10 inches at an expense to the Department of £989 15s., or 3s. 6¾d. per foot, to which apparently a like amount is to be added for the share of the cost borne by the private individual or company. In prospecting for coal two types of drill were employed, the diamond drill and the calyx machine. The last mentioned is said to be an entirely new invention, working with steel cutters instead of diamonds, at an expense much less than that of the diamond drill. The cost of operating the latter in the coal measures was 11s. 6d. per foot, while for the calyx machine it was 6s. 0½d., a marked difference in favor of the new machine. The following reference to the work of the calyx drill is made in the report of the Superintendent of Drills for 1894:

The calyx drill, working with steel cutters instead of diamonds.

"In the trial bore the calyx drill demonstrated its capabilities in a decisive manner. The drill as a whole was certainly not much to look at, but its performances were somewhat astonishing. It cut a 5½ inch bore to 700 feet, and produced a perfect core by manual labor and horse gear at less than half the cost of average diamond drill work in similar strata." The Superintendent adds that he considers it "possible to evolve from the primary principle of this system the most economical and generally useful boring machine that could be devised." No account is given of the construction of the calyx drill, and no opinion can therefore be formed as to the likelihood of its usefulness

in piercing the dense strata which in part compose the Huronian system of Ontario. Its use in Victoria seems to have been so far confined to the softer rocks of the coal measures.

Victoria adopts the same system of apportioning cost as Ontario.

In his report for 1894 the Secretary of Mines for Victoria remarks upon a change of principle which was introduced during the year as regards the employment of Government diamond drills. On several grounds, among which that of economy was prominent, it was decided that future borings, whether for gold or coal, should unless in cases of purely national character recommended by the departmental officers, be done only when the persons requiring it paid one-half the expense. "This change," the Secretary states, "has been productive of much good. The work done by the drills has been restricted to cases where some tangible result might be foreseen, and cases have almost ceased where applications for diamond drill service were made, and pressed apparently in view of the local expenditure of the drill expenses." It will be observed that the system in use in Ontario, so far as the sharing of the expense between the Government and the party obtaining the services of the drill is concerned, is practically the same as that now in vogue in Victoria after trial of a plan there by which the work was done entirely at the cost of the public chest.

Scope of exploration work for a drill in Ontario.

In view of the undeveloped mineral wealth of this Province and of the liberal terms upon which the use of the drill is offered to miners and owners of mineral properties, it would seem that there should be plenty of room for its employment in Ontario. Should an improvement take place in the nickel mining industry, either by the springing up of an increased demand for the metal, or the introduction of new methods in the treatment of the ore, such as the substitution of pyritic roasting and reduction for the expensive roast-heap and coke smelting processes, there would be a large field of usefulness for it in proving some of the many unexplored and dormant copper-nickel deposits of the Sudbury region. The demand for both magnetic and hematite ore to supply the new blast furnace at Hamilton should, and doubtless will, induce owners of iron properties conveniently situated to examine them with the view of transforming them into producing mines. In the Lake of the Woods, Rainy lake and contiguous regions are many gold locations of promise, some of which are at the present time being explored by drills in the hands of private parties. If the holders of others were equally desirous of ascertaining the quality and extent of the quartz veins on their lands, the assistance afforded by the Government would very materially lessen the cost to them of acquiring this information. We can hardly hope to find in our ancient Huronian rocks, denuded by glacial action as they have been, beds of auriferous gravel, such as are encountered under ground in Australia and California, however deep or assiduously we may bore for them, but in exploring for copper, nickel, iron, gold, or stone of any kind, the use of the Government drill might well be extended with advantage to the holders of mining lands and to the Province at large. T. W. G.

SECTION VII.

MINING ACCIDENTS.

The year 1895 was marked by a noticeable decrease in the number of fatal accidents as compared with the two previous years. In 1893 three, and in 1894 seven lives were lost in casualties of various kinds, while last year only two miners paid the last penalty to the hazardous nature of their calling. Both of these occurrences took place in the Lake of the Woods gold region, the Sudbury mining district being entirely free from loss of life. Apart from these two cases, the mishaps of the year were relatively light in character, affecting in most instances individuals only, and causing injuries, painful no doubt, but happily not serious or permanent. Comparative casualties.

The table on page 236 sets forth in detail the particulars of the accidents, both fatal and non-fatal.

For the second consecutive year explosion of dynamite in hot ore is lacking as a cause of accident, the two casualties due to the unexpected discharge of explosives on roast heaps occurring in cold ore. This is sufficient proof of the propriety of the legislative provision made in 1894, prohibiting the use of dualin or explosives of any kind for the breaking up of roasted ore while in a heated condition. This dangerous practice in one or two previous years was the cause of several fatal accidents. The causes of accidents. Premature explosion.

Falls of rock and ore, too, usually a prolific source of trouble, do not occupy a place among the causes of disaster in 1895. Falls of rock and ore.

The most notable accident of the year, an account of which is given below, was that at the Sultana gold mine, where the burning of the shaft house imprisoned nine miners for about five hours, and resulted in the complete asphyxia of one of the men and the partial asphyxia of the others. Had the second shaft in process of construction at the time been completed, it is possible the men might have made their way to the surface even when their escape by the other was entirely cut off by the blazing building and timbers at the top. No complaint has ever been made, so far as the Bureau is aware, as to the ventilation of the mine or the sufficiency of the means of ingress and egress, and while there may be room for difference of opinion as to the advisability of housing all the machinery under one roof, and that the roof of the shaft house, and also as to the sufficiency of the means of signalling from the top to the bottom of the mine, the novel and unexpected nature of the occurrence was such as to render it difficult to foresee and take precautions against. Fire.

Particulars of fatal and non-fatal accidents at mines during the year.

No.	Date.	Owner of mine.	Name of mine.	Name of injured person.	Nature of injuries.	Cause of accident.
1	March 11	John F. Caldwell	Sultana	John Lagier	Killed	Burning of shaft house, and consequent imprisonment in mine.
				Charles Ankstrom	Partial suffocation; recovered.	
				Rudolph Erickson	do do	
				William Prym	do do	
				Charles Yen	do do	
				John Ankstrom	do do	
				Peter Straw	do do	
				Emic Petersen	do do	
				Alex. Neilson	do do	
2	Aug. 7	Canadian Copper Coy	Copper Cliff	James Dubroy	Burned on back and arms	Explosion of molten slag.
				Charles Reinens	do do	
3	" 13	do	do	Orson Crank	Compound fracture of ankle bones	Fall of piece of rock from skip.
4	" 15	do	do	Paul Rioux	Slightly injured	Premature explosion.
5	Nov. 5	do	do	Aug. St. Ammond	Loss of eyesight	do
6	" —	—— Brearton	——	—— Brearton	Killed	do
				—— McCarthy	Severely injured	do

The second fatality also took place in the neighborhood of Rat Portage, in a small prospecting pit being sunk by two miners named Brearton and McCarthy, by which the former lost his life through the premature explosion of a charge of dynamite. Owing to this accident not having occurred in a mine employing at least six men under ground, the provisions of the law did not require it to be reported to the Bureau, and it was not so reported. As however it was clearly a mining accident, inquiry was made into the circumstances connected with it, which are briefly detailed below.

Explosion in a prospecting pit.

The first accident of the year, and the one involving the largest number of men, though fortunately all but a single individual escaped with their lives and without permanent injury, was that referred to above at the Sultana gold mine, Rat Portage. About 9.30 a.m., on Monday, March 11th, the shaft house at the mine, containing air-compressor, hoisting and other machinery, was seen to be on fire, having been ignited it is thought by a spark from the smokestack. Pump and hose were at once set to work upon the flames, but after about ten minutes playing the roof fell in and broke the pipe, disabling the pump. The use of buckets was then resorted to, but without much success, and the fire continued to burn until the building was consumed. At the time of the occurrence there were nine men, mostly Swedes and Finns, at work below ground. Foreman Johnson signalled to them to come up by pulling on the bell wire as soon as the fire broke out, but as the bell was at the top and not at the bottom of the shaft, they did not understand the message, and before they could appreciate the gravity of their situation, or indeed realize that they were in danger at all, the framework at the mouth of the shaft was in flames and all means of egress were cut off. The foreman stated that from the time the fire broke out a period of about ten minutes elapsed, during which the men might have come out from the shaft, but that afterwards escape was impossible until the building was burned down. Anderson, the engine-tender, placed such period at three or four minutes. One of the miners, Charles Ankstrom, having filled an ore bucket and rung the bell, went up to see why it was not hoisted, but found the shaft on fire. He tried to force his way through the blazing timbers, but though he got as far as the shaft house floor, he was unable to do so. He immediately descended the ladders and informed his fellow-workmen, who went up in a body, but were likewise driven back by the fire. Nothing was then left to the entombed miners but to await the result with what composure they could. Their situation was indeed precarious. Smoke from the burning structure above, mingled with the water thrown on the flames, found its way in large volume down the shaft, and as the supply of fresh air was cut off by the stoppage of the air compressor and the proportion of oxygen lessened by the fire at the mouth of the shaft, there was imminent danger of the imprisoned workmen perishing by suffocation. Great anxiety was felt on their behalf by their companions at the surface and by those responsible for the management of the mine, but nothing could be done for their relief until the fire at the shaft house had subsided. This took place about 2 p m., and a rescuing party was organized to descend the mine and ascertain the fate of the shut-in miners.

Fatal accident at the Sultana gold mine.

Rescue of the imprisoned miners.

The first man to go down was Axel Carlson, a brave Swede and one of the drill-runners at the mine, who was lowered by rope and tackle, the ladders having been burned. Albert Johnson, foreman of the mine, and Gust Blonquist, a miner, followed, then Mr. J. R. Bell, the assayer, and Mr. W. G. Motley, M. E. They found the men, one on the first level, five in the timbers above it, and three at the bottom of the mine. They were nearly all insensible, and all in various stages of suffocation. One by one they were carefully secured and sent to the surface; but when the rescuers reached John Lagier (or Lazier), who was the third man encountered, they found him at the last gasp. As Mr. Motley put his arms about the unfortunate miner to adjust the rope round his chest, he heaved a long sigh and never again showed symptoms of life. Dr. Macdonell, of Rat Portage, who was doing everything possible for the men as they were brought up, worked for some time endeavoring to revive the deceased, but his efforts were in vain. All the rescued men were suffering more or less from asphyxia, and two or three from exposure to the water which poured down the shaft in the attempt to extinguish the fire. In a short time however they recovered their usual state of health. It appeared from evidence taken at the inquest subsequently that Lagier had been at work at the mine only some three or four days, and that he was troubled with heart disease, or some other complaint which produced a chronic shortness of breath. It had been remarked on several occasions that after ascending the ladderway, on coming out of the mine, he seemed distressed and was obliged to sit down and rest.

Coroner's inquest, and the

At the request of Stipendiary Magistrate James Robinson, an inquest was held on the body of Lagier by Coroner Frank J. Ap'John. A jury of twelve citizens of Rat Portage was summoned, Mr. Frank Gardner being foreman. Considerable evidence was given by those present at the occurrence, including several of the imprisoned miners and members of the rescuing party. Mr. John F. Caldwell, owner of the mine, gave testimony as to its general condition, and the manner in which the requirements of the Mines Act were complied with. Dr. Macdonell stated it as his opinion that Lagier did not die of asphyxia, but that he had been suffering from heart trouble or spasmodic asthma, and that the excitement induced by the situation in which he found himself might have caused his death, or it might have been due to fatty degeneration of the heart. The jury returned the following verdict:

Jury's verdict.

"We find that the said John Lagier came to his death from excitement and prostration caused from the burning of the shaft house over the Sultana mine. We find from the evidence that the owner of the mine, at which place the accident happened, has complied with the regulations demanded by The Mines Act of the Province of Ontario, and that no blame for the death of said John Lagier can be attached to the owner of the mine."

Deceased was 30 or 35 years of age, unmarried, and a recent immigrant from Grenoble, France. He was not an experienced miner.

The mine employés when questioned on the subject at the inquest testified that in their opinion the arrangements for ventilating the mine, the ladders, signals, etc., were quite sufficient and equal to those generally in

use in other mines. Mr. Motley, then manager of the Regina Gold Mining Company, stated in his evidence that he had been down the Sultana mine shaft and all through the mine several times, and that he considered it in every way a safe place for men to work in. The ladderways were in perfect order and the air was good. As to signalling, he said: "At the other mines it is customary to have a regular code of signals between the top and the bottom of the mine. Had there been an alarm given from the surface which the men understood, they would have come out, in case they had time. It would take about five minutes to descend the ladder 150 feet and return were one in a hurry."

Accidents at the Canadian Copper Co's smelter.

Under date of August 7th the Canadian Copper Company reported that at 3 p.m. of that day an explosion of molten slag had occurred at their smelter whereby two of their workmen, James Dubroy and Charles Reinens, were burned about the back and arms. The burns were small, but numerous. The explosion took place in the settling pot at front of No. 1 furnace Its cause was not quite clear, but it was probably due to the unexpected starting of a rivet head in the settling pot, thus allowing a sudden leakage of water to occur. The men recovered from the accident without having received any permanent injuries.

mine,

On 13th August, at the Copper Cliff mine of the same company, one of the workmen named Orson Crank received a compound fracture of the ankle bones of the left leg. The ore was being dumped from the skip to the rock house floor as usual, but a piece rolled on Crank's ankle before he got out of the way. The injury was severe enough to require amputation of the foot, but otherwise the Company reported on 22nd August that he "was doing very nicely."

and roast heaps.

At 2 p.m. on August 15th a premature explosion took place on a roasted ore heap at the Copper Cliff mine, by which one Paul Rioux received somewhat severe injuries on the face, eyes, neck and hands. Rioux was in the employ of Messrs. Trist & McKinnon, contractors for roasting the ore, and was the workman whose special duty it was to do the blasting in the ore heaps, having been employed at this work for a long time. The man's own statement as to the occurrence was as follows:

"I lighted the fuse before placing the cartridge in the hole. I then found that the hole was too small, and I tried to push the cartridge in. The fuse burned down quicker than I expected it would, and the cartridge exploded before I got away." Rioux was taken to the hospital at Sudbury, and although it was at first feared that he would lose the sight of one of his eyes, he made a favorable recovery.

On 5th November Aug. St. Ammond, also in the employ of Messrs. Trist & McKinnon as blaster at the Copper Cliff roast yard, while engaged in blasting in cold ore on roast bed No. 266 was badly hurt by a prematurely discharged shot, being especially injured in the eyes. No one witnessed the occurrence, but St. Ammond's own account of it was that he had lit the fuse, putting the cartridge in the hole, and did not think he had cut the fuse long enough. Everything possible was done to alleviate the injured man's suffer-

ings and improve his condition. He eventually regained his health, but not his eyesight, and is now totally blind.

Amending the Regulations in consequence of a fatal accident near Rat Portage.

The Mines Act 1892 declared that no mine should be subject to Part IV. of the Act, which provided among other things for the reporting of accidents to the Bureau of Mines, unless more than six persons were employed under ground. Owing to this provision it is possible that some accidents which were strictly mining in their character may have occurred without being brought to the notice of the Bureau. A case of this sort was reported in the Toronto papers by which one Brearton lost his life and one McCarthy was seriously injured through a premature explosion of dynamite in a mining prospect just east of the town of Rat Portage in November last. No notice of this casualty was sent to the Bureau, but on inquiry being made it was found that the two men were working in a pit on the property which was only a few feet deep. The stick of dynamite had been put into the drill-hole, and had either been dropped with some violence to the bottom or was being tamped home when the explosion occurred. Brearton received the full force of the shot under the chin, and was driven back against the wall of the pit and instantly killed. McCarthy, who was standing close by, was knocked over and had his arm badly damaged by the fall, or by the rock striking him. He was taken to Winnipeg, where it was at first believed he would have to submit to the amputation of his arm ; but in time he fortunately recovered without sustaining the loss of it. It is stated that Brearton was careless in handling explosives, and that McCarthy knew nothing about them, not being accustomed to mining. The coroner was notified of Brearton's death, but no request was made to him to hold an inquest and he did not consider one called for. The occurrence was plainly accidental, and if blame was due to any one it was doubtless to the unfortunate man who paid the penalty for his carelessness—if careless he were—with his life.

All accidents to be reported to the Bureau.

Section 53 of The Mines Act 1892 was repealed by An Act to make further provision respecting Mines and Mining, passed during the session of 1896, and all mines, pits and other openings from which any ores or minerals are taken are made subject to the provisions of Part IV. of The Mines Act, and all accidents happening in them are required to be reported to the Bureau, regardless of the number of employés. T. W. G.

Mr. BORRON'S REPORT

ON A SECTION OF THE HEIGHT OF LAND REGION NORTHEAST OF LAKE SUPERIOR.

To Archibald Blue, Director of the Bureau of Mines:

Sir,—In accordance with instructions received through you from the honorable the Commissioner of Crown Lands I have examined, with special reference to its mineral resources, that part of the provincial territory contiguous to the Canadian Pacific Railway between Trudeau station in the vicinity of White lake and Missinaibi station, and have the honor to submit the following brief report. Region of country examined,

The object aimed at by this examination was, as understood by the writer, intended to be of a practical rather than a scientific character ; not a minute and exhaustive exploration of a small tract, such as is required from the prospector, but a general and somewhat hasty examination of an extensive territory. and the object aimed at.

Before proceeding to lay before you the conclusions arrived at, it may be well to give a short narrative of the course pursued.

For various reasons the writer concluded it would be better to proceed to White lake via Sault Ste. Marie and Michipicoten than to take rail direct to that point. Among others was the uncertainty of being able to procure the requisite outfit and suitable men if the all rail route were adopted. Outfit for the work.

At Sault Ste. Marie, to which the writer proceeded by way of Owen Sound, he was joined by John Driver, whose services had been previously secured. A suitable canoe and a few needful mining tools and supplies were also obtained at that point. From thence Michipicoten was reached by the steamer Telegram. At the Hudson's Bay Company's post there it was confidently expected that there would be no difficulty in procuring Indian voyageurs and guides thoroughly acquainted with the territory it was proposed to examine. In this we were not so fortunate as previous experience had led us to anticipate. Since the completion of the Canadian Pacific Railway the Indians whose hunting grounds are on the height of land, and who used to resort to Michipicoten to trade their furs and obtain supplies, have for the most part ceased to do so, finding it more convenient to do their trading at the inland posts of the Company. There were in consequence very few Indians at the post, and these mostly employed in fishing for one or the other of the parties engaged in the pursuit of that industry. This occasioned some delay, and necessitated the employment of men who although good voyageurs were not as intimately acquainted with the country as was desirable. Supplies and men.

OUTLINE OF THE ROUTES TAKEN.

Having on previous occasions followed the usually travelled canoe route between Michipicoten and Missinaibi station, the writer concluded to take another and rarely followed route up the Magpie, a large tributary which

joins Michipicoten river about a mile above the post. This route is a difficult and tedious one for other than small and light canoes. Our guides too were not as familiar with it as we had been lead to expect. They were several times unable to find the portages, thereby occasioning considerable delay. Our progress was rendered still slower by the serious indisposition of John Driver, and his inability to afford needful assistance on the portages and in ascending the rapids and strong currents met with on this route. It took in consequence nearly a week to reach the point where the Magpie is crossed by the Canadian Pacific Railway. This point is five miles east of Grassett station, and about a mile only below Esnagami or Shell lake, the source of the Magpie.

The region of country traversed by canoe and rail.

As there was a possibility of the writer being required in connection with the Indian branch of the claims of the Dominion against the Province, then as now under arbitration, arrangements had been made before leaving Toronto that if wanted he would be notified to that effect by letter addressed to White River. It was thought better therefore to get such letter, if sent, before proceeding further west, and the postmaster was telegraphed to forward any letters lying at that office to Grassett.

In the meantime arrangements were made for the exploration of Esnagami or Shell lake, where it was expected that an Indian named Paul, thoroughly acquainted with the country from thence to White river, would be found. Hopes were entertained that he might be able to accompany us as guide, or at all events afford us reliable information in reference to the territory, and more particularly the canoe route, if any such were practicable, from lake Esnagami to White River station. The search for Paul was not rewarded with success, and having completed our exploration of the lake, the extreme length of which is about 20 miles, we took rail from Grassett to White River station, a distance by the line of 36 miles.

From this point to White lake the White river is fairly navigable by canoe, and the trip about 28 miles from White River station to Montizambert, some two miles distant from Indian station, was completed in two and a-half days. In this stretch, which is much longer by water than by rail, about half a dozen portages, several of considerable length, had to be made.

White river.

On his arrival at Montizambert, where the Hudson's Bay Company have a post, the writer had the pleasure of meeting with several old friends, officers and servants of the Company, whose acquaintance he had made on previous expeditions to James bay. One had been last seen at Rupert's House, another at Albany Factory, the third at Mamattawa, the junction of the Kenogami (Long lake) and Oba rivers, and the fourth at Brunswick Post, formerly Missinaibi, by all of whom he was cordially welcomed.

After examining White lake, White river was re-ascended as far as Bremner station, where to avoid the rapids and portages above that point, which would have occasioned considerable delay, the cars were taken to White River station, sixteen miles distant by the line. Several small lakes on the south side of the railway in the vicinity of this station were then visited and the rocks examined. This done, having seen sufficient of the general character of the country to enable him to form an opinion as to the probability or

otherwise of the existence of economic minerals in paying quantity, the writer returned with his party by rail to Missinaibi station.

At Missinaibi the two men hired at Michipicoten left for home, and some little difficulty and delay were experienced in obtaining others to replace them. Substitutes however were procured from Brunswick Post, at the northern end of lake Missinaibi, about forty miles distant.

The next point visited, but somewhat hurriedly examined, was a large lake called Wabatonguishene. It is situated a few miles northwest of the western extremity of Matagama, or Dog lake, and is the source of the Michipicoten river. During the exploration of this lake the writer contracted a severe cold, which compelled him to return to Missinaibi sooner than he otherwise would have done.

Planning a trip to lake Opazatika.

Disappointed with the character of the country in the immediate vicinity of the railway, the writer now determined, if able, to go as far as lake Opazatika, with the view of testing an apparently large deposit of iron pyrites, discovered by him in the year 1886 near the river Opazatika, but which for want of the necessary tools he was at that time unable to examine as fully as he desired.

Arrangements having been completed, a start was made, and on the second day Brunswick Post was reached. Here he was informed by the officer in charge that the portages, numbering about twenty, over which it would be necessary to pass both going and returning, were for the most part in a bad state, and as some threatening symptoms in connection with his cold had developed themselves, he was reluctantly compelled to abandon his intention of going further himself.

John Driver however, who had had considerable experience as an explorer, was sent forward to make the examination that was wanted. With instructions and a map showing where the deposit was situated, no doubt was felt as to his finding it. The writer himself returned to Missinaibi, and a few days later to Toronto.

Subsequently he went to Sault Ste. Marie to meet Driver, when he got back from the Opazatika country. He had been instructed to return via Michipicoten.

The result of Driver's exploration will be found in his report to me, given as nearly in his own words as possible. If he be not too sanguine the results are, to say the least, satisfactory. The iron pyrites vein discovered by him at the Split Rock portage is especially worthy of further examination.

THE GEOLOGICAL FORMATION, OR COUNTRY ROCK.

The Laurentian and Huronian systems of rocks.

The character of the country rock is one of the first points upon which every miner and prospector desires to obtain reliable information. On the great plateau which constitutes the height of land and divides the waters flowing northward into Hudson bay from those flowing into lake Huron, lake Superior and the St. Lawrence river, two groups or series of rocks only are met with. These are known to our geologists as the Laurentian and the

Huronian. Both are included in recent classifications under the general term Azoic, or Archæan, signifying destitute of life, or non-fossiliferous.

Sir William Logan on the Laurentian.

Of the Laurentian formation the late Sir William Logan, Director of the Geological Survey of Canada and the author of the terms, speaking of the rocks included in this series, says: "They are the most ancient yet known on the continent of America, and are supposed to be equivalent to the iron-bearing series of Scandinavia. Stretching on the north side of the St. Lawrence from Labrador to lake Superior, they occupy by far the larger share of Canada, and they have been described in former reports as sedimentary deposits in an altered condition, consisting of gneiss interstratified with important bands of crystalline limestone. . . . It is also in contact with these limestones, or near them, that the iron ores are found which so prominently characterize the Laurentian series, as well as the lead-bearing veins belonging to it; and as the limestones possess external and internal characters, which render them more conspicuously distinct from the gneiss than any of the component members of the gneiss are from one another, they afford the least difficult means of tracing out the physical structure of the Laurentide district. The distribution of the limestones therefore becomes a subject both scientifically and economically important, but it is one the investigation of which will require a great amount of patient labor. To determine the superposition of the component parts of such an ancient series of rocks as the Laurentian is a task which has never yet been accomplished in geology, and the difficulties attending it arise from the absence of fossils to characterize its different members."[1]

Again, on pp. 49-50, it is stated: "In the reports of the Survey the Laurentian rocks have been described in general terms as gneiss, interstratified with important masses of crystalline limestone. The term gneiss, strictly defined, signifies a granite with its elements, quartz, feldspar and mica, arranged in parallel planes and containing a larger amount of mica than ordinary granite possesses, giving to the rock a schistose or lamellar structure. When hornblende instead of mica is associated with quartz and feldspar, the rock is termed syenite, but as there is no specific single name for a rock containing these elements in a lamellar arrangement, it receives the appellation of syenitic gneiss. Gneiss rock then becomes divided into two kinds, granitic and syenitic gneiss, and the word gneiss would thus appear rather to indicate the lamellar arrangement than the mineral composition. Granitic and syenitic gneiss were the terms applied to these rocks in the first reports, but as granite and syenite are considered rocks of igneous origin, and the epithets derived from them might be supposed to have a theoretical reference to such an origin of the gneiss, while at the same time it appears to me that the Laurentian series are altered sedimentary rocks, the epithets micaceous and hornblendic have been given to the gneiss in later reports as the best mode of designating the facts of mineral composition and lamellar arrangement, without any reference whatever to the supposed origin of the rocks. When the general term gneiss therefore is used it may signify both kinds, or either;

[1] Report of Progress of the Geological Survey of Canada for 1853-54-55 and-56, pp. 7, 8.

and the epithets micaceous and hornblendic are applied to the rock to indicate that the mica greatly preponderates, or excludes the hornblende, or the hornblende the mica."

Later, the officers of the Geological Survey seem to have divided the rocks embraced in this Laurentian system into two formations, known respectively as the Upper and the Lower Laurentian formations.

Dr. Bell's views on the Azoic period.

Dr. Bell, assistant Director of the Survey—who (as the writer believes) has examined a greater extent of territory covered by Laurentian rocks than any other geologist in Canada, and who has devoted nearly thirty years to the study principally of the Huronian and Laurentian systems—has given us in his memoir entitled "The Geology of Ontario, with special reference to Economic Minerals," in a popular form the conclusions at which after so much time and labor he has arrived. He writes as follows on the Azoic period:

Azoic rocks of Ontario.

"This great division is so called because as yet no trace of either animal or plant life has been found in it. It is also termed the Archæan period or age. In Ontario the rocks which belong to it may be grouped under the Laurentian and Huronian systems, although other divisions have from time to time been proposed for some of them. These two divisions are considered sufficient by many geologists for the Azoic rocks of the whole world. Without taking local peculiarities into consideration, the primitive rocks of all countries may be classified under one or other of these great systems, even if subordinate divisions should be found convenient in some localities. The characters and proportions of the different rocks which make up the Laurentian and Huronian are naturally found to vary much in different regions, although they are everywhere essentially the same systems and retain the same relative positions, representing similar conditions in the geological history of the globe. They form the foundations of the crust of the earth as far as we can observe or penetrate it, and are easily separable from any rocks lying above them. Their crystalline characters and generally disturbed condition are their distinguishing features. At the same time it is true that, in some instances, newer rocks have been so altered locally or even over considerable tracts as to resemble the Azoic, but we generally find some means of distinguishing between them. In Canada and the United States the Laurentian and Huronian are usually intimately associated, but their lithological features, or the internal characters which distinguish rocks from one another, are sufficiently distinct to separate them. As they are for the most part included in one great area, they must be to some extent described together.

Geographical distribution of azoic rocks.

"The Azoic rocks of Canada have been represented as extending from the region of the great lakes in the form of two arms, one stretching northeastward to the Atlantic coast of the Labrador peninsula, and the other northwestward to the Arctic sea, east of the mouth of the Mackenzie river, the intervening space being filled up with Palæozoic rocks. Further light on the subject has however shown that the geographical outline of these rocks takes the form, approximately, of an immense ellipse which includes the northeastern part of the continent, Baffinland, Greenland, and many of the islands of the frozen sea. It comprises the whole of the Labrador peninsula, measur

ing a thousand miles each way. On the other side its boundary runs, with a westward curve, from lake Winnipeg to Coronation gulf, another thousand miles, with a spur towards the mouth of Mackenzie river. The Palæozoic rocks of Hudson bay form a sort of broken fringe around that inland sea, and and a belt of them extends thence northward across some of the islands to the Arctic ocean. The geographical depression of Hudson bay, to which the rivers flow from all sides, forms the central drainage basin of this Azoic area of North America, and its origin is of very ancient geological date. At various periods of the earth's history it was probably covered by waters more or less separated from the outer ocean, and the newer rocks in its centre were deposited from these in the same way that deposits are forming in the bottom of the bay at the present time.

Nucleus of the continent.

"Although the superficial continuity of the Azoic region just described is broken in many places by channels of the sea, and by outlying patches of Palæozoic rocks, it may be regarded as practically one area of compact outline, and it forms the nucleus upon which the rest of the continent has been built. On the east it falls abruptly into the deep ocean, but on its landward sides it is flanked by the formations which have been successfully deposited around it. The farther we recede from it the newer the rocks become, till in one direction we reach the Rocky mountains, which have broken up through a vast thickness of these succeeding strata.

"As a rule, the Huronian rocks are less contorted or corrugated on the small scale than the Laurentian, but on the large scale they partake of the same foldings which have affected the latter. At one time they were supposed to be less abruptly bent into anticlinal and synclinal forms, but this appears to have been a misconception, due to the fact that some of the highest beds happened to have been first studied in a district that is less disturbed than the average. In other localities some of the Laurentian rocks are as little disturbed

"The greater part of the mixed Laurentian and Huronian region belongs to the former, and of it the Lower Laurentian is the prevailing type. As represented on a map, the Huronian occurs in the midst of the Laurentian in the form of more or less completely separated areas, or with straggling connections between them.

A region of mixed Laurentian and Huronian rocks.

"They seem to be in a manner interwoven with the Laurentian as basins or troughs more or less elongated, and as tracts of angular and other forms filling spaces between great nuclei or rounded areas of Laurentian rocks. Patches of Huronian strata of comparatively small size are numerous throughout this vast Azoic region of the northeastern part of the continent, and in addition to these there are a few of great extent. One of them is on the northwest side of Hudson bay, and appears to stretch far inland. Another lies to the north and northeast of lake Huron, reaching from the east end of lake Superior almost to lake Mistassini, a distance of 600 miles. In Wisconsin and Michigan also considerable areas exist, and in the country between lake Superior and lake Winnipeg Huronian rocks of many different basins are largely mixed with

the Laurentian, constituting perhaps one-third of the whole area. In the country between the northern extremity of lake Winnipeg and Hudson bay the writer has described a Huronian trough 180 miles in length, and Mr. A. S. Cochrane found these rocks between the Saskatchewan and Churchill rivers, and largely developed on the north side of lake Athabasca.

"We have given the above brief account of the relations of the Laurentian and Huronian systems to each other, and of the distribution of the two in northeastern America, in order that the reader may the better understand what is to follow in regard to the rocks that occupy the greater part of Ontario as now extended. The country formed by these two systems is sometimes referred to as the Laurentian region, but it is more correctly called the Azoic or Archæan when areas of both classes of rock are included. We shall now proceed with a short description of the Laurentian alone. The Laurentian system.

"As indicated in the table already given, the Laurentian system has been divided into two formations, the lower of which is sometimes also called the Primitive Gneiss series. The differences between them can be best pointed out after having described the Lower Laurentian. Both formations give rise to the same kind of country which is so familiar to all Canadians. As a rule it is hilly, but not greatly elevated above the sea, and full of lakes. Within the regions which have been sufficiently explored to speak of with some degree of certainty these amount literally to tens of thousands, and occupy a very considerable proportion of the whole surface, estimated in some sections at one-third and even one-half of the whole area. The cause of the existence of these lakes will be explained further on. The high northern part of the coast range of eastern Labrador has not been glaciated, but almost everywhere else there are unmistakable signs of this phenomenon. This has given rise to the peculiarity of the Laurentian country which Sir William Logan has so graphically described as mammillated. This vast hilly country however cannot properly be called 'the Laurentian range.' Lower Laurentian or Primitive Gneiss series.

"The Lower Laurentian consists essentially of gneiss. In some localties its foliated or stratiform character is obscure, and it may be called granitic or syenitic. The distinctly banded varieties differ from one another considerably in the proportions of their constituents. True gneiss is defined by lithologists to consist of quartz, felspar (orthoclase) and mica, but most of the gneisses of both the Lower and Upper Laurentian contain hornblende, often in large proportion. These would be called hornblendic or syenitic gneisses. The proportions of these minerals vary constantly, and it is seldom that there is any great thickness having the same composition. One layer may consist chiefly of felspar and quartz, the next may contain much hornblende or mica in addition, while a third may consist largely of any one of these alone. These minerals in fact enter into the composition of all the gneissoid rocks in every conceivable proportion. It is easy for the mere lithologist to select typical varieties of rocks in a good cabinet collection, but in the case of the gneissoid rocks it is impossible for the field geologist to recognize these distinctions on a large scale. In the Lower Laurentian, hornblende is almost as generally diffused as the felspar, quartz and mica. Character of the Lower Laurentian.

It sometimes occurs as bands consisting almost exclusively of this mineral in both the lower and upper divisions. In the latter it has been noticed particularly in proximity to the limestone bands and the iron ore deposits. The Laurentian hornblende rocks are usually blacker and more coarsely crystalline than those of the Huronian system.

Color and form of gneiss rocks.

"The prevailing colors of the Lower Laurentian gneisses are greyish and reddish, from very light to the very dark shades, depending partly on the colors and partly on the proportions of the different constituents. The felspar (orthoclase) is white, gray and red, or sometimes yellowish or greenish; the quartz is white to gray, and the mica and hornblende black, or very dark green or brown. These rocks are generally distinctly foliated, or show a lamination or parallelism in the arrangement of their constituent minerals easily traceable by their colors. Where these are very distinct and the layers continuous and close together, the rock in cross-section is described as ribboned; where the layers are further apart it is called banded. But the bars are often broken into a series of tapering dashes which pass below or above each other, or with an interlocking or 'dovetail' arrangement, or the bars may be connected by their streaks or rows of dots. Even where the tendency to parallelism in the texture of gneiss is not conspicuous, from the want of contrast in colors, it can always be seen on close inspection, and this kind of structure or 'grain,' like that of wood, is what distinguishes gneiss from granite, the latter having no such parallelism in the arrangement of its constituent minerals.

"On the supposition that this structure of gneiss, even when the parallel bands of different kinds are quite thick, may be accounted for in other ways than by stratification due to the action of water, some geologists hesitate to speak of it as stratification or bedding, notwithstanding its apparent identity with it.

Foliation and strike.

"As a rule, in Canada the exposed surfaces of the gneiss rocks show little sign of decay, on account of their having been worn down by glaciers in comparatively recent geological times, and they have an extremely massive appearance. When broken up, as by blasting, they fracture almost impartially in all directions; or show only a slight tendency to cleavage along the plane of their foliation. This foliation in the gneisses of the Lower Laurentian is usually contorted or bent in various directions on the small scale, and any differences in their composition or color do not appear to be sufficiently persistent to trace them far in any direction on the ground; in other words, they are not so sufficiently differentiated into great bands of distinct kinds as to enable them to be shown on a map of moderate scale, as is often the case with the gneisses and other rocks of the Upper Laurentian. Still, in those areas which have been most examined, a general tendency has been observed to strike more nearly in a northeast and southwest direction than in any other. In eastern Labrador, and also in Baffinland, the larger mountain ridges run northwestward, but it has not been ascertained that this is the direction of the strike of the gneiss in those regions. The monotonous gray and red massive and contorted gneiss above described prevails

throughout the vast Lower Laurentian region, stretching from the great lakes of the St. Lawrence to Hudson bay and thence to lake Winnipeg, as well as in the western and most of the southern parts of the Labrador peninsula.

"In some districts the Laurentian rocks are cut by dikes of greenstone or trap, some of them very large and affecting the geographical features. Rivers or long narrow lakes sometimes lie upon the courses of dikes which had become decomposed and yielded to glacial action, while falls and rapids occur where hard dikes cross the courses of streams. Both the Lower and Upper Laurentian formations are cut by veins of two classes, the first being much more ancient than the second. The former, which are numerous, are as it were fused into or amalgamated with the country rock and are composed of the same minerals. In some cases the gangue is almost entirely felspar, in others quartz, but oftener the two minerals are mixed together and a little mica or hornblende is added. The larger veins of this class are very coarsely crystalline, the smaller ones have a tendency to branch off or become reticulated. Although the division between them and the wall rock is distinctly defined by the contrast of color, there is no actual separation between them, the two breaking like one rock. Metallic ores have not been found in these veins in economic quantities. Veins of this class may be seen in almost any locality where the gneisses are exposed. The veins of the second class are not so common, and have been formed long subsequent to those of the first class. Their gangue, which is frequently calcspar, separates easily from the wall rock, and is apt to contain galena, copper and iron pyrites and zinc blende; but these minerals, like the vein stones themselves, have perhaps been derived from rocks resting on the gneiss, or which rested upon it at some former period when these veins were formed, but which have since been removed by denudation. The lead-bearing veins of the counties of Frontenac and Leeds, and those north of the Canadian Pacific Railway opposite the head of Black bay, lake Superior, are examples of the second class. With the exception of the contents of veins of this class and the coarsely crystalline felspar and quartz of those of the first class, no minerals of economic value are known to occur in Canada in the Lower Laurentian formation or primitive gneiss series above described."[2]

Dikes and veins in the Laurentian system.

Minerals in the veins.

The conclusion arrived at by Dr. Bell, namely, that with rare exceptions "no minerals of economic value are known to occur in Canada in the Lower Laurentian formation or primitive gneiss series" shows: 1, How essentially necessary it is that the country rock shall be of a favorable description if we expect to find minerals of economic value; and 2, that there is no reasonable ground for the hope that the prospector will be able to do so, whatever time, labor and money he may expend in the search, if the country rock is Lower Laurentian or primitive gneiss.[3]

Dr. Bell's conclusions.

[2] Report of the Commission on the Mineral Resources of Ontario, pp. 6-10.

[3] In the Summary Report of the Geological Survey for 1895, p. 18, Director George M. Dawson says, after referring to the Lake of the Woods and Seine River mining regions: "From a still wider point of view, embracing the nickel, copper and gold deposits of the vicinity of Sudbury and Sault Ste. Marie, as well as those above particularly referred to, the economic importance and metalliferous character of the rocks of the Huronian system become even more apparent. This fact was recognized and the importance of the geological conditions insisted upon by Sir William Logan, in Reports of the Survey made nearly forty years

Now the provincial territory lying on the north side of the Canadian Pacific Railway from White lake, or say Trudeau station to Missinaibi station, a distance of nearly one hundred miles by the line, is in the opinion of the writer almost entirely Lower Laurentian, and he agrees with Dr. Bell in thinking that few if any minerals of economic value are likely to be found in that formation. This opinion is not based on a thorough and exhaustive examination of the country, but upon what he has seen of the character of the rock where exposed on White lake, the upper White river, Esragami or Shell lake, Wabatonguishene lake, Dog lake, Cross lake, and lake Missinaibi, and as presented to view in various cuttings on the railway. All of these mentioned are large lakes, varying from ten miles to twenty-five miles in length, and proportionately wide. The boulders in the gravel pits and elsewhere on the route were repeatedly examined as also likely to afford more or less reliable indications as to the character of geological formations north of the railway.

A region of Lower Laurentian.

The inference drawn from all these various sources, together with information obtained during former explorations, is that between the points mentioned, namely Trudeau and Missinaibi stations, there are no areas worth mentioning of Huronian or other more favorable formations within fifty miles or more on that side of the track.

To have taken notes with the view to furnishing details of the position, strike, dip and so forth of rocks apparently so unpromising, if not altogether barren, would have been simply a waste of time and labor, and of no interest or advantage whatever to either prospectors or miners. Specimens however were taken showing the general character of the country. It will be seen that hornblendic or syenitic gneiss greatly predominates over other varieties, and that the hornblende exists in all proportions, from small scales until in some instances the rock is almost entirely composed of it.

The inference from the geological facts.

Crystalline limestone, which Sir William Logan considered to be so characteristic of the Laurentian system in eastern Canada, was nowhere met with. Its occurrence in any considerable body interstratified with gneiss must, the writer presumes, be confined principally if not entirely to what is now called the Upper Laurentian formation, in which, when not itself metalliferous, it appears to exercise a very beneficial influence on the metal-bearing character of the neighboring gneissoid, trappean or other rocks associated with it, as well as by its decomposition greatly enriching the soil.

In the few small patches of Huronian rocks represented on the maps of the Geological Survey as found in the area under consideration, none of those seen by the writer are of a kind which within his experience have been productive.

Thus it appears that the country rock or geological formation of this part of the Province is not such as to encourage the hope that its mineral resource will prove of any value or importance.

ago, and it is gratifying to observe that the practical miner is now beginning to appreciate the value of a large amount of geological work carried out in the country to the north of the Great Lakes, which a few years ago it might have appeared difficult to justify in the ligh of any economic results up to that time achieved. There can now be very little doubt tha every square mile of the Huronian formation of Canada will sooner or latter become an objec of interest to the prospector, and that industries of considerable importance may yet b planted upon this formation in districts far to the north, or for other reasons at presen regarded as barren and useless."

But desirable, even indispensable, as a favorable country rock may be, it is not everything. In order to the existence of metallic ores or other minerals in paying quantity, there must be veins or other openings in these rocks in which the ores and minerals, wherever they come from, may be deposited. These veins, too, must be sufficiently large and regular. There are thousands of square miles in this and other countries where the rock is all that could be desired; but in which, owing either to the entire absence of veins or to the smallness and irregularity of such as do exist, not a single workable deposit of the economic minerals commonly found in these rocks elsewhere has been discovered.

The absence of regular veins in the region.

This absence of powerful and regular veins can only be accounted for on the supposition that the forces which have produced mineral veins in some countries have been inoperative in others in which, although the geological formation may be the same, such veins do not occur. A few words therefore on this subject may not be out of place.

What then are mineral veins and how have they been formed?

MINERAL VEINS, AND HOW FORMED.

Veins may be defined as fissures of uncertain length, width and depth, filled with mineral matter differing in appearance and composition from the enclosing, or as called by miners the "country rock." Thus there are veins of calcareous spar, quartz, barytes, fluorspar and such like, alone or combined with other minerals. If metals, native or in the condition of ore, should occur in the veins along with one or more of the spars mentioned, they are usually characterized as gold, silver, copper or lead veins, however small the quantity of metal may be as compared with that of the gangue or associated stony minerals. When however the fissures are filled entirely with stony matter, such as greenstone, trap, porphyry, basalt, etc., supposed to be of igneous or volcanic origin and to have been injected from below in a molten state, such fissures are usually called "dikes" and not veins.

Veins and dikes.

The question of how these fissures in the rocky crust of the earth have originated is one of more than passing interest. They are usually ascribed to one or other of three causes, viz.:

Origin of fissures.

1. The contraction or shrinkage of the so-called igneous and metamorphic rocks in the process of cooling.

2. The contraction or shrinkage of the sedimentary rocks in the process of drying and of consolidation.

3. The elevation or depression of the earth's surface by volcanic disturbances, which when sensible are called earthquakes

Contraction as a cause.

As regards the first mentioned cause of fissures in the rocky crust of the earth, it is a well known general law that with a very few exceptions all bodies, whether in a solid, fluid or gaseous condition, expand when heated and contract when cooled. The expansion and contraction of iron in its solid condition is seen in the way and manner in which the tires are put on carriage or other wheels. That of fluids is illustrated by the mercury and alcohol in the bulbs of our thermometers. And the expansion and contraction of vapor and gas under like circumstances is manifested in the case of steam. Thus, on the

assumption that the Azoic or Archæan or old time primitive rocks, which include our Laurentian and Huronian systems, have been at one period of the earth's history in a highly heated and expanded condition, fissures or veins would certainly be formed in these rocks as they cooled and contracted; and it is to this cause probably that many both of the veins and dikes met with in these rocks owe their existence.

The formation of veins as a consequence of the shrinkage of sedimentary rocks in the process of drying and consolidation may be witnessed almost everywhere, on a small scale during periods of drouth, in the sediments at the bottom of dried up pools and other places. It is strikingly exemplified in the calcareous mud deposits on the coast of James bay. Small veins and strings may have originated in this way in some of the sedimentary rocks, but few if any would be likely to extend to any great length or depth, nor to penetrate successive beds of rock widely differing in mineral composition and character.

Volcanic disturbance as a cause.

The largest and most powerful veins and dikes wherever found, and in whatever formation they may be situated, owe their existence, in the writer's opinion, to volcanic disturbance or agencies. The tremblings, undulations and shocks caused by the action of volcanic forces on the so-called solid crust of the earth must of necessity produce great fissures in all parts of this crust not in a soft or plastic condition. A like result would follow from any considerable upheaval or depression of the surface of the earth, to whatever cause it might be due. During more or less violent earthquakes the opening of great cracks in the earth has often been witnessed and recorded. Whether in length, depth or width, it is reasonable to suppose that fissures (whether dikes or veins) thus formed must be greater in every way than those which owe their existence to either shrinkage or contraction.

Up-throws, down-throws and lateral slides.

Subsequent undulations, though much less violent than those which first occasioned the fissures, would, the writer believes, unquestionably tend momentarily when crossing such fissures to elevate or depress one side or wall of the fissure or vein before or after the other, and thus occasion an upward and downward movement. Nor is it difficult to conceive that when the direction of these subsequent undulations was other than at right angles to the course or bearing of the fissure, an irregular lateral motion or shifting of the walls of the enclosing rock may have been occasioned, with a tendency at least to produce what are called up-throws and down-throws of the opposing walls, as well as lateral slides in such veins. The polished surfaces exhibited by the walls of some veins, known as slickensides, may possibly be in some measure due to this cause.

Slickensides.

Similar effects produced upon lake ice.

The writer has been led to consider such movements of the rock possible by those he has observed as taking place in the great fields of ice on lakes Huron and Superior under the influence of undulations caused by the action of strong wind on the vast unfrozen body of water outside. These undulations when crossing the larger cracks or fissures produce on a small scale such movements as are here referred to.

Fissure veins and bedded veins.

Veins are further divided into two classes : (1) those which cross the formation, if stratified, at a greater or less angle, known as true fissure veins ; and

(2) those which are interstratified with the enclosing rock and called bedded veins. The writer's mining knowledge and experience has been mostly acquired in working true fissure veins. As regards bedded veins, he does not claim to speak with the authority of an expert who has spent the greater portion of his life in searching for and mining the ores which on this continent are so frequently found in veins of that character. For information on this and other less frequent forms in which ores are deposited, the writer would refer to the valuable and interesting paper by Dr. A. P. Coleman pp. 50-53 in last year's Report of the Bureau of Mines.

Trap dikes.

In the territory which forms the subject of this report no true fissure veins worthy of the name were met with. There is abundant evidence that the forces which elsewhere produce such veins have been in a state of activity, and that great cracks or fissures have been produced—fissures both crossing and running with the strike of the Laurentian gneiss. But no sooner had these fissures been formed than they were apparently filled again with stony matter from below, called trap, as destitute seemingly of economic minerals and metals as the gneiss rock itself. These enormous fissures would appear to have penetrated through the then possibly thin crust of the earth to the underlying molten matter, and this has been forced up or probably has risen to the surface, filling the fissures in much the same manner as water rises and fills cracks in the ice. The number and magnitude of these trap dikes, and their presence interbedded with gneiss and otherwise, is one of the most striking geological features of the territory. But their presence does not in the writer's opinion help to redeem the generally barren character of this Lower Laurentian formation of which they are simply a part.

The region an unpromising field for minerals.

Thus we arrive at the conclusion that whether from the point of view of character of the country rock, or from that of the existence or otherwise of mineral-bearing veins, the territory referred to is not in the opinion of the writer such as offers a promising field for the enterprise of either the miner or prospector.

SOUTH OF THE RAILWAY LINE.

At White River and Missinaibi stations.

Our explorations south of the Canadian Pacific Railway were limited and confined to a few small areas near White River station and Missinaibi station. In the former the rock is Laurentian, and similar to that on the north side of the line. South of the line, at Missinaibi, the country is represented on the map of the Geological Survey as Huronian, with the exception of a few patches on Dog and Mattagaming lakes and extending all the way to lake Superior, thus embracing a large area. Of this the writer can say little, excepting that the rock, in his opinion and so far as he has seen it, is more favorable to the occurrence of minerals of economic value than the Laurentian gneiss so prevalent on the north side of the railway. It differs however in character from the Huronian rocks at and in the neighborhood of the Bruce Mines, with which group he is most familiar. A good deal of exploratory work was carried on at and in the vicinity of Michipicoten thirty or more years ago, particularly by a Mr. Johnstone of Detroit. This gentleman took up a number of mining locations which he believed to be valuable

A Huronian area of greater promise.

Prospecting near Michipicoten

for iron and copper. He manifested the sincerity of his belief by spending all his money in prospecting them, and died in that faith about the year 1869 or 1870. There has been more or less prospecting carried on at various times since, but little or no money spent in development to the writer's knowledge. Since the construction of the railway the Huronian rocks on and around Dog lake have been partially exploited by prospectors and some little work has been done on one or two locations, but not, it is thought, with any satisfactory results. He has himself noticed copper (pyrites and green carbonate) in several places, but the veins were small and neither well-defined nor regular. He has been told that nickel has been discovered, and has seen specimens of galena and good iron ore, said to have been got between Dog lake and Michipicoten.

and around Dog lake.

It will be noticed that John Driver, on his return from Missinabi to Michipicoten, found several veins which he thinks deserving of a more thorough examination.

Further exploration desirable.

Copper pyrites so frequently accompanies gold in greater or less quantity that it has more than once occurred to the writer that some of the veins on poor Johnstone's locations, though worthless for copper, might be found on careful examination to contain the far more precious metal.

In view of his limited and imperfect examination and knowledge of this part of the Province, the writer does not feel justified in expressing any strong or very decided opinion in reference to its mineral resources, nor yet as to its affording a desirable field for the prospector. Where however it is so easily accessible he would incline to favor further careful exploration of the country between Michipicoten and Dog lake.

No prospect of placer gold

There does not appear to be any probability of placer gold being discovered on this portion of the height of land plateau, certainly not in paying quantity. The rocks of the Lower Laurentian formation would appear rarely, if ever, to contain gold, and there are no Upper Laurentian or Huronian rocks known to the writer within a great many miles north of the line of the C.P.R. If such there be, the areas are inconsiderable. The decomposition of these Lower Laurentian rocks is very slow, and has produced little soil or other loose material. The far greater proportion of the sands, gravels and clays deposited on this and most other parts of the height of land plateau is the result of glacial action, and the material has been chiefly furnished by the comparatively soft sandstones and limestones of the broad belt of palæozoic rocks bordering upon and south of James bay. In drift deposits of this character there is no likelihood whatever of gold being found.

There is a possibility that traces at least of gold may be discovered in the sands and gravels of some of the rivers flowing into lakes Huron and Superior and passing in their course over Huronian or other gold bearing rocks. But the writer has not heard of gold having been found on either the north or south shores of these lakes, in the sands or gravels of the rivers. Had it been discovered in anything like paying quantity, the fact would have been published far and wide. 'Prospected' as they have doubtless been, there is no probability of its occurrence otherwise than in very small and unremunerative quantity.

BEYOND THE HEIGHT OF LAND.

As related in the first part of this report, an apparently large deposit of iron pyrites was discovered by the writer ten years ago on a tributary of the river Opazatika, misnamed Big river, but which is in fact ordinarily an exceedingly small one. It may have a better claim to the title during the melting of the snows in early spring, when all the northern rivers are greatly swollen. In view of the value of and increasing demand for pyrites the writer, unable to go himself, sent John Driver to uncover and ascertain the size of the vein (as it appears to be), to put in a few shots, and bring back specimens of as large a size as he could get. This mission he accomplished in a very satisfactory and creditable manner, and his report on this deposit and on an apparently important discovery made by himself at the Split Rock rapid on Missinaibi river is as follows :

Opazatika river

"On August 8th Mr. Borron decided to go down to the Big river, a tributary of the Opazatika. After getting supplies and other things necessary for the journey we left Missinaibi Post at 2 p.m., crossed the height of land at 5 p.m., and as Mr. Borron was not feeling well we camped early. The next day an early start was made, as the morning was fine and there was no wind. The water on Missinaibi lake was smooth, so we reached Brunswick Post of H. B. Co. at 5.30 p.m. and camped for the night. Next morning Mr. Borron came to my tent and said that he was unable to travel, but if I would go on and get the specimens he required for the Government he would return to Toronto, which I agreed to do. After making the necessary preparations and receiving instructions from Mr. Borron, I started out for Big river on the 12th. We followed the Missinaibi down to the Opazatika portage, which is in a straight line northeast 40 miles, and thence crossed over to Opazatika lake, which is 3½ miles south of Missinaibi river. From the west end of Opazatika lake to the junction of the Big river is 42 miles northeast, so that the distance over all in a straight line from the southwest end of Missinaibi lake is 91 miles, including 5½ miles up the Big river, to the pyrites bed or vein. Having looked over the vein, which I had no trouble to find, the next work was to cut out a path or road on the south bank down to the camp, a distance of 1½ miles. Next morning was gloomy, as it rained all night. We uncovered the rock along the south bank the full width of the bed of pyrites, which is 35 feet from wall to wall. I put in two shots, which broke up the vein rock two feet deep, from which I got specimens. I then uncovered the rock one hundred feet back from the bank and found the vein covered over with a foot of sandy loam. My men uncovered the vein from wall to wall, and I found it to be 35 feet wide. The course N. W. 20° W. and at an angle of 65° E. In tracing the vein south I found it to be deeply covered with soil. The rock gradually rises in going back from the river, and at 300 yards is about 20 feet above the water level of the river.

John Driver's report to Mr. Borron.

A pyrites deposit on Big river.

"When Mr. Borron explored Big river in 1886 he thought that the rock in the river was a boulder, from which he got his specimen. But I found it to be part of the vein, 15 feet wide and two feet above the water. It crosses one-third of the river on the south side about 200 yards up stream. The river here takes a bend to the south and comes back on itself, so that in following the course of the vein on the north side it cuts across this point of land, which is a drift soil. I could not uncover the vein, as the water soaked through the ground and made uncovering impossible. However in following up the course I found the vein to crop out at the foot of the rapid on the south side of the west branch, at the forks of the river half a mile northwest from the place where I had been working. Here the rock is deeply covered with a stiff clay. I got the men to clean off the part of the vein and took what specimens I could break off with my pick hammer. From the surface the pyrites at this place does not look as good as at the lower place, although I am quite sure it is the same vein. The rock is so deeply covered with a clay soil that I could not follow it any farther, but no doubt it continues on for a much farther distance northward. In following up some 300 or 400 yards, I found that the country rock took a change, being on the west side of the vein Laurentian, while on the east side and all the way down the river to the first rapid it is a slate, what I take to be a Huronian.

Tracing the deposit.

Timber and forest fires.

"The timber on Big river is chiefly black spruce and tamarac, and the soil clay loam. One thing I noticed is that the Indians who hunt on this river are careful with regard to fires, as the country as far as I could see has not been run over by forest fires, whereas on the Opazatika river as far as I could see from the river, the country was all run over with fire some four or five years ago.

"After picking up my specimens I started on 20th August back up the Opazatika river, examining the rocks as I came along, but could not find where the pyrites bed on Big river crosses the Opazatika. The water in the river is deep and no rocks could be seen or found, not even in the river bed. But coming up the Sawbill falls I found that the rock which forms this falls is Laurentian gray granite, and the same continues all the way up to the Sharp Rock rapid. At this rapid the rock changes to Huronian slate. The distance from Sawbill falls to the Sharp Rock rapid is nine miles, showing this Laurentian band to be of about that width. It runs out to a point southward, and the Huronian rock to a point northward. The Laurentian granite is again met with at the west end of Opazatika lake and follows up the river. At the head of the first rapid met with in going down the river there is a diorite dike about fifty feet wide, running northeast and dipping south. On the south side of this dike is a large vein of magnetic iron running the same course as the dike. I did not examine this deposit, as I had no provisions to allow me time to do so. I was informed by the Indian guide that it is traceable for a long distance on the north side of the river.

Magnetic iron ore.

A large vein at Split Rock rapid.

"Coming up to the Split Rock rapid, I observed the rock to be discolored and covered with iron rust. I found it to be a large bed of iron and arsenical pyrites, from which I took specimens. I put two shots in on the vein and found it to be fifteen feet in width. It crosses the river at the foot of the rapids and dips 60° east. I followed the vein southward 200 yards with no change; it looks very promising, and I think would pay to test for gold. The vein is traceable for a long distance on the north side of the river also; and as the rocks are not covered with soil the vein is easily got at." [4]

Use of iron pyrites in manufactures.

Iron pyrites when in large bodies, such as described by Driver in the foregoing report, if not too much mixed with quartz or other gangue matter, is valuable. Very great quantities of it are used at what are known as alkali works in Great Britain and elsewhere. It is employed by alkali manufacturers on account of the large proportion of sulphur it contains, and as a substitute for Sicilian sulphur. If not immediately, pyrites cannot fail in the near future to become valuable on this continent, and will ultimately be required for alkali works in our own Province of Ontario, which possesses all the elements necessary for the successful manufacture of the products of such works. The more important of these products are sulphuric acid or oil of vitrol, muriatic acid, soda, soda-ash and bleaching powder (chloride of lime). All these articles are extensively required and employed in many of the most important arts and manufactures, such as bleaching, glass-making, paper

[4] A number of the samples of rock and ore collected by John Driver were submitted to Dr. Coleman of the School of Practical Science, two of which he examined under the microscope and five of which were assayed under his direction by Mr. W. E. Boustead.

A sample from Sawbill falls on Opazatika river is described as "a medium grained gneiss or granite, light gray in color, with a somewhat schistose look. Under the microscope it proves to consist chiefly of quartz, orthoclase, plagioclase and biotite, with a little secondary epidote." Another sample from the same locality is "a somewhat schistose fine grained gneiss, with bands of gray and brownish red. It consists of quartz, much weathered felspar and hornblende." Following are the results obtained by Mr. Boustead:

Sample from Opazatika lake. Massive iron pyrites, with some intermixed quartz. Contains neither silver nor gold.

Sample from Split Rock, Missinaibi river. Schistose rock impregnated with pyrrhotite, very much weathered. Contains a slight trace of gold.

Sample from foot-wall of pyrites vein at Split Rock. Quartz somewhat stained with oxide of iron and carrying iron pyrites. Contains neither silver nor gold.

Sample said to be from vein at Split Rock rapids. Quartz with felspar, iron pyrites and molybdenite, stained with oxide of iron. Contains a slight trace of gold.

Pyrites from Split Rock rapids. Massive pyrrhotite with intermixed quartz. Assayed for nickel and found to contain none.

pulp, baking powder, and others too numerous to mention. The materials most essential are salt, lime and sulphur or pyrites. Fuel and labor of course are important factors. In most if not all these respects our Province is very favorably situated in regard to the establishment and successful operation of alkali works. The residue of the pyrites after sublimation of the sulphur is often of considerable value, containing, as it frequently does, more or less gold, silver or copper. The deposits of iron pyrites referred to are well deserving of further examination with a view to determining their extent and value.

SOME GENERAL CONSIDERATIONS.

Interest of prospectors, miners,

The labor, time and money the prospector expends in the vain search for minerals in localities where there is little if any probabilty of such being found, is simply waste, and should be minimized or guarded against as much as possible. Nor is it in the interest of the prospector or miner, nor yet of the Province generally, that the labor and capital which might have sufficed to develop the mineral resources of some more favored section of the Province or profitably employed otherwise, should thus be literally lost.

workingmen

There are many who fancy that if the capital thus expended be foreign capital all classes must be benefited, however disastrous the results may be to foreign investors. The writer fails to see it in that light. That a few individuals may benefit by expenditures of this kind, however ill-advised and unprofitable, cannot be denied. Employment for a time is provided for miners, laborers and mechanics; a convenient market for some kinds of produce may encourage settlement and farming in the neighborhood of the mine—poor though the soil may be; stores may be erected and churches and school houses built, and most likely taverns if not hotels. But these seeming advantages are lost when the collapse comes, as it surely does when the mine shuts down and operations are suspended.

The workingmen who, many imagine, would be most generally benefited are not infrequently the greatest sufferers. Unsteady and precarious employment is the bane of the workingman, be he miner, laborer or mechanic. These men have for the most part probably come long distances, at great expense, in the hope of steady employment. They must now go elsewhere to seek and possibly be unable to obtain work for weeks or months. If they have been tempted to build cottages and make homes for themselves, these must be abandoned and sacrificed. Thus the apparent advantage of a few months' or even a few years' employment is in many if not most instances entirely lost by those who are supposed to be benefited the most.

and farmers.

Then take the case of the farmers who have been induced to settle in the vicinity of such a mine. They build and clear and fence, and for a time rejoice in a good market for their produce. But the farmer like the workingman is doomed to suffer disappointment, if not positive loss. For if the soil be poor, which is not unlikely, and other markets remote or inaccessible, which is also probable, the suspension of the mine compels him to either abandon his farm and all his improvements, or to be content with hard work and a bare sufficiency of the necessaries of life.

The influence of mining booms.

It may be contended that booms, however originated, and however disastrous to the foreign capitalists who may be induced to purchase and work mines of little or no promise, may nevertheless be of great advantage to the Province if they only enable the Government to dispose of large quantities of wild land which otherwise might not be sold for many years. This is a heresy which it may be dangerous to combat, and difficult to dispel. But when we consider, as we should, that by far the greater part of the money received from the sale of mineral lands during periods of excitement comes out of the pockets of our own people, that many of these (who were or are engaged in other pursuits) have been crippled if not ruined in consequence, it will, the writer thinks, be admitted that it is at least doubtful whether it might not have been better had the money thus locked up remained in the legitimate business of the unfortunate speculators, and the land itself in the possession of the Crown.

While prosperous and dividend-paying mines are the best and most trustworthy evidence as well as advertisement of the mineral resources of the Province, and sure to attract capital from abroad, so on the other hand repeated failures and disasters have precisely the opposite effect. The country in which this occurs cannot fail to acquire, sooner or later, an unfavorable reputation, capital will seek investment elsewhere, and mining claims and properties of the greatest promise will fail to attract it, and probably remain undeveloped for many years.

Hence it is important that the Bureau of Mines should be in a position to direct the attention alike of prospectors, miners and capitalists to those parts of the Province which in the opinion of practical and disinterested men are really most promising, rather than to those less promising or altogether worthless.

Viewed in this light the writer hopes that the work of last season, interrupted and shortened as it was by illness, and expended on what for the most part appears to be an unpromising mineral region, may still be of greater or less value to the Province, and to those interested in the development of its mining industry.

Respectfully submitted,

E. B. BORRON.

Toronto, March, 1896.

SIXTH REPORT OF

THE INSPECTOR OF MINES.

REPORT OF THE INSPECTOR.

To the Director of the Bureau of Mines:

Sir,—I have the honour herewith to submit to you my sixth Annual Report on the mines of the Province of Ontario, being for the year 1895. Letter of transmission.

Several classes of the mines have been lying idle during the year, viz: Iron, silver, copper and phosphate, while only to a limited extent have the mica mines been worked. Some nickel mines were also closed down.

Your extended visit to the mines throughout the western part of the Province, the account of which will appear in your own report, rendered it unnecessary for me to duplicate their inspection, not only to avoid expenditure, but especially as the majority of these mines were not being worked on an extensive scale nor at great depth. These causes will account for the limitation of the present report.

The recent construction of the large iron furnace at Hamilton, which is now in full blast, will in all probability be the means of causing some of the owners of large iron deposits to open up their properties with the prospect of obtaining this market for their ores.

The increased activity in gold mining during the year appears unabated, and was attended with such encouraging results that the coming season may be regarded as one of much more promise than any former one, and an increased output from both the iron and gold mines may be expected.

I have the honour to be, Sir,

Your obedient servant,

A. SLAGHT,

Waterford, March 14, 1896. Inspector.

GOLD.

The Creighton gold mine was lying idle at the date of visit to the locality, October 31st. Mr. J. R. Gordon, who had the former charge of the mine, informed me that during the year drilling over a section contiguous to the shaft had been done to the distance of 1,500 feet. Six or seven bores had been put down to the varying depth of 300 to 500 feet, and in each case the auriferous vein was intersected. The result of the operations has been most satisfactory, placing the existence of a large deposit of gold ore beyond contingency. The shaft has reached the depth of 200 feet, and the ore is free milling. The machinery at the mine, details of which appeared in a former report, has had some addition made as required for use and the whole plant is kept in a carefully protected state. It is expected that the Company will renew operations at the mine at an early period. *Creighton Mine.*

The Gordon Mine.

On May 21st the Gordon mine was visited. It is situated on lot 6 on the third concession of Rathbun township, and one mile south of Boland lake, which has its outlet into lake Wahnipitae. It is near the winter road cut out by the Crystal Gold Mining Company. Four men were engaged in

Sinking a shaft,

sinking a shaft 14 by 16 feet, and had reached a depth of 25 feet. The formation was firm, and no timbering was required. Drilling was being done by hand and the rock lifted by windlass. There was a considerable inflow of water. It was expected to reach the auriferous quartz rock at a depth of about 40 feet. A domicile 14 by 16 feet had been erected for cooking and sleeping, which, with a blacksmith shop and tent, comprised the buildings. Late in October I met Mr. Gordon in Sudbury, and he informed me that the shaft had been continued to a depth of 40 feet, and the property had been

and prospecting with a diamond drill.

further tested by the use of a diamond drill; 120 feet east of the shaft a bore had been put down at the angle of 70° on the dip of the vein, which had been tapped at the depth of 174 feet. One hundred feet further east another bore had cut the vein at about the same depth. Prospecting had been done with encouraging results on several other properties in this immediate vicinity during the summer.

The Crystal Mine.

The Crystal mine is on location W.D. 43 in the township of Rathbun, comprising 26 acres held in fee simple by the Crystal Gold Mining Company of Rathbun. Capital stock, $1,000,000, in shares of $100 each. Hon. Peter White is president, and Mr. W. R. White secretary-treasurer; both are of Pembroke. Gold discovery was made on the property in 1892, on the height of land between lakes Wahnapitae and Matagamasing. The first discovery was on the southeast side of the escarpment, 48 feet below the entrance into the shaft. Another outcropping was found on the top of the hill, and a vertical

Exploration work by shaft and drifts.

shaft 4 by 7 feet was sunk on this vein, following it down 36 feet, when the vein left the shaft with a dip northeast. The shaft was continued in barren diorite to the total depth of 100 feet, and neatly cribbed to near the bottom. A northeast drift had been run in at the bottom of the shaft to intersect the vein, and had been extended 25 feet at the date of my inspection, May 20th and 21st. A south drift at the bottom of the shaft had been run in 10 feet, and was being extended with a view of tapping the vein first discovered. The work was being done under the direction of Mr. Rinaldo McConnell, of Mattawa, managing director, and Capt. Allan McDonald had charge of the mine work with a force of 10 men employed on day shifts only. The ladders were placed perpendicularly in the part of the shaft walled off for this use. I directed that they be changed to an incline, with suitable rests, as the regulations in the Mines Act require. The rock was being lifted by the use of a horse whim, which was working properly and provided with brakes, etc. The bucket would hold about half a ton. Guide timbers were being put in the shaft for the future use of a cage.

Buildings.

The shaft house, 24 by 30 feet, was also being used as a blacksmith shop, which I advised should be placed in another building, to avoid danger of fire. The sleeping camp is 20 by 64 feet. Office, store room and laboratory are under one roof. Stabling, hay shed, etc., are also provided. The

whole outfit is kept in a neat and excellent condition, and the scenery is picturesque and inviting. Exceedingly rich specimens of gold ore are found on the property.

The Mondoux Mine.

The Mondoux property on lot 5 in the fourth concession of Rathbun had been opened about one year previous to my visit, on May 21st, by an open cut 8 by 20 feet and from 10 to 15 feet in width, with cross-cutting. Surface stripping had extended along the vein for 60 feet. The quartz, I was informed, showed a good percentage of gold.

The Ledyard Mine.

The Ledyard mine was lying idle at the date of my visit, September 17th. Mr. W. G. Yeoman, of Toronto, was left in care of the property for the owners. Since last inspection the shaft had been sunk to a greater depth of 15 feet, making total depth 75 feet. A stope on the vein had been made at the first level, extending 25 feet east and raised to the surface. All the vein matter had been removed between the hanging and foot walls. The ladder-way down to the first level had been properly walled off from the part of the shaft used for hoisting the ore. A new Huntington mill had been put in in place of the old one, with capacity of twenty tons daily. The mill building had been strengthened by additional sills and other supports, so that it is now well fitted to stand all strain of machinery when in operation. No other changes of importance have been made since the former report. Work had been conducted at intervals during the early part of the year both at the mine and mill, but has been suspended since the middle of June. Early in December last the management of the mine was placed in the hands of Mr. A. S. Brooks, of Marmora, who had put it in excellent condition for future operations. About 200 cords of wood were on hand. The property has been well looked after by the caretaker, Mr. Yeoman, who has resided at the mine since work was discontinued.

Progress of development work.

Mr. Peter Powers was doing prospect work with a few men on lot 14 in the tenth concession of Marmora, comprising 100 acres, on which he has taken an option with right to purchase for an English Company. The work on September 18th consisted of several open cuts along the vein to the depth of a few feet, exposing ore of free gold, apparently of excellent richness.

Prospecting in Marmora.

Mr. Donald Clark of Marmora has opened a property adjoining the Deloro mine, owned by the Canada Consolidated Company. A shaft has been sunk 30 feet, opening the vein to 5 feet in width. Fine specimens of ore have been taken from the bottom of the shaft. An option with right to purchase has been taken on 5 acres.

Malone Mine.

On September 18th I met Mr. H. E. Lawson, M.E., at Malone, who was then engaged in treating 100 tons of mispickel ore for the Crescent Gold Mining Company of Montreal as a test to determine future operations. The ore was obtained from a shaft which had been sunk to the depth of 60 feet on the southeast half of lot 6 in the eighth concession of Marmora, being about five miles south of Malone. The company hold an option on the property, and should the test prove satisfactory the mill at Malone may be removed to the mine and active mining carried on. The mine was lying idle meantime. The value of the gold ore being tested was about $12 per ton as

by mill run. The chlorination process was being adopted for the extraction of the gold only. The pulverized ore was roasted in a reverberatory furnace, which had been temporarily constructed for the test. It was then treated in tubs with a current of chlorine gas. The chloride is leached out in the tubs with water and the gold precipitated as metal by the addition of iron sulphates. The precipitate of gold collected and melted was said to give a yield of about 98 per cent. of gold. The test was not completed at the date of my visit, but I understand that it has proved satisfactory to the company and that extensive operations will be carried on as soon as the spring time will admit.

Testing mispickel ore by chlorination.

Deloro Mine.

The Deloro mine is out one mile from Marmora station on the Central Ontario Railway, and is owned by the Canadian Consolidated Mining Company. In September I met on the property Mr. Thomas Benfield, of Newark, N. J., in company with Mr. Alfred I. G. Swinney, of London, England, and Mr. R. H. Harland, public analyst to the Greenwood Board of Works, whose laboratory is at 37 Lombard St., London, E. C., specialists, who were examining the mine and making tests of the value of the ores. Mr. Benfield informed me that he had recently taken a lease on royalty of the property from Messrs. Stephens and Newberry of Detroit for a period of twenty years, and should the examination of the ore prove sufficiently satisfactory the mine would be vigorously worked on a large scale. Mr. Benfield, with his friends, intended to remain some time in testing the property and also to examine other producing mines with a view of purchase. In a recent letter from Mr. D. Clark, of Marmora, he says: "Mr. Benfield has bonded some 6,000 acres of land in this township with the intention of prospecting and testing them during the coming summer."

Bonding properties.

Bannockburn Mine.

On September 18th I visited the Bannockburn mine, which is on lot 28, in the fifth concession of Madoc, near the station of Bannockburn, on the Central Ontario Railway. The village at the station of the same name contains a population of from 150 to 200, with about 40 residences, a hotel, two stores, schoolhouse, etc. The discovery of this mine was made several years ago, and a considerable amount of development work was done on it, together with the erection of a ten-stamp mill and an outfit for treating the ore. Soon after all operations ceased until August, 1894, when the property was leased with the option to purchase by Messrs. F. Straith Miller, of Toronto, and F. S. P. Fanchot, of Buckingham, Que. Mr. Miller immediately took charge of developing the mine, and the work has steadily progressed with favorable results, with the exception of three months suspension during the winter. He also refitted the mill, which is well supplied with water, as it is built on the bank of the Moira river within a quarter of a mile of the station; the workings at the mine are about 300 yards from the mill, with an excellent road over which to haul the ore. The work at this date consists of stripping the vein and blowing it open for 700 feet and sinking four shafts at different points of the respective depths of 26, 30, 45 and 30 feet. In the deepest shaft, 32 feet down from surface, a drift 6 by 7 feet has been driven in west 17 feet; the main opening is north and south. Several minor shafts or pits

Extent of the workings.

have been sunk along the workings to the depth of a few feet. The vein, which consists of three main stringers in a band or fissure of micaceous and calc schists, has been exposed to an unbroken length of 700 feet. It is also accompanied by a granitic band which alternates with diorite and forms a foot wall of the fissure, the hanging wall being more or less of mica and calc schists. Between the stringers bands of schist rock are met, which cut out as the bands come together and meet again as greater depth is attained. In sinking, several of the stringers are already united and become auriferous as they join the western vein. The veins of small width at surface invariably increase as they go down and form one vein of auriferous quartz along the entire length of 700 feet of working. From the surface to the deepest workings gold is found by panning, and is visible in the quartz, and numerous specimens were shown to me some of which contained several dollars worth of gold. A single specimen taken from the north pit contained $15 worth, and some from the Lee pit were of much greater value. In the south pit specimens are found varying from $1 to $8. Numerous assays have shown the exceeding richness of the deposit.

Rich specimens of ore.

The ten-stamp mill has been recently refitted at a cost of several thousand dollars. The machinery consists of a boiler 75 h. p., engine 60 h. p., manufactured by G. I. Brown & Co. of Belleville, Cook's amalgamator, copper plates, six grinding and settling pans, two Frue vanners, one composite roasting furnace which may be used either for roasting sulphuret ores or the treatment of lead ores. The mill is 40 by 60 feet, with a lean-to, a boiler room, blacksmith shop, etc. The mill has only as yet been operated on samples. About 100 tons of various grades of ore have been treated.

Machinery and buildings.

A force of 10 men was employed at the date of my inspection. It has varied nowever from 10 to 16 laborers. The works both at the mine and mill were in a safe condition for the workmen and apparently were conducted with care and economy.

Workmen.

Dr. H. N. Coutlee, whom I met at Sharbot Lake station, September 16th, informed me that he had done prospecting for gold on a property in Oso with good showing. Assay tests had given from 2 oz. down to a trace. Six men were employed, and the workings had reached a depth of 15 feet. The location is within 2 miles of Oso station, on the Kingston & Pembroke Railway.

Prospecting in Oso township.

The McGown mine, which was described in last annual report by Dr. Coleman, was visited early in November. An open cut had been made at the base of the escarpment for the distance of 40 yards and about 5 feet in width, and varying from 2 to 5 feet in depth, exposing the vein for the entire length. Two hundred yards southeast from this working another opening had been made for some distance, showing the vein, and rich specimens of gold ore had been obtained, some of which were also rich in copper. Several fine specimens were shown to me, and it was stated that some recent assays made by Professor Heys of Toronto gave $30 per ton in gold and in copper 60 to 80 per cent. The vein matter is about 5 feet in width and has been traced by surface cuttings for the distance of three-quarters of a mile.

McGown Mine.

Empress Mine. Peter McKellar of Fort William informs me that the discovery and development of the McKellar gold lode near Jackfish bay, lake Superior, last summer promises to be one of the most valuable finds in the district. The vein is very large, 10 to 40 feet wide, and continuous for a long distance along its course. It has been opened out by cross cuts on three different half-mile square locations. The vein traverses the Huronian green schists near intrusive syenite, and consists of quartz associated with what appears to be talc schist. Both the quartz and schists are well mineralized with the auriferous sulphides, or iron, copper and lead. Free gold is present through the ore, and some of it is remarkably coarse. Although comparatively little work has been done on the vein, it has yielded hundreds of the finest gold specimens that have ever been produced in the district. Quartz veins in the locality were known to carry gold for many years; and now after this valuable discovery it will be a great field for the explorer, as the formation is of large extent in the vicinity. A local chartered company has been formed with capital stock of $100,000 in 20,000 shares of $5 each; $20,000 working capital has been raised. Work has been in progress since the beginning of December last on one of the locations, R569, under the direction of Mr. Wm. M. Caldwell, building roads, houses, etc. Mr. J. T. Horne is manager, and he has purchased a ten-stamp mill with copper plates and Frue concentrators of the latest improved style from Fraser & Chalmers of Chicago. The mill is in course of erection, and is expected to be in operation by the latter part of April next. Mining has been commenced on two shafts. One of the great advantages of this lode is that there will be no lack of ore for the mill, as it can be quarried from ledges 10 to 40 feet in width. Mr. McKellar says: "We ran 1,800 lb. of the common ore through the McKellar pulverizer at Fort William. The amalgam caught gave a gold button weighing 11 dwt. The tailings are rich, but on account of the frost I was unable to sample them. I panned and assayed some of the concentrates, and they gave $225 to the ton."

A company organized, and a mill in course of erection.

Permanency of gold-bearing veins in the Huronian rocks of western Algoma.

In reply to an inquiry made of Mr. McKellar regarding the depth of the ore deposits in the western districts of the Province, he writes: "In western Algoma within the last year there has been a great improvement in mining, with a considerable increase of ore of the gold milling capacity. The good results of the deeper mining is beginning to establish confidence in our gold mines. The Sultana mine is working below the 200-foot level, and is yielding much better results than when working on surface ores. The gold bricks from the weekly mill runs this winter are $2,000 to $3,000 each, much larger than formerly. Letters lately received from the Foley developments on the Weigand gold lode, Shoal lake, state that the shaft is down nearly 150 feet, and that the vein is larger and richer in free gold than it was at the surface. The richest gold ores taken out of the Huronian mine were taken from the lower workings at a depth of 100 feet, the samples sent to the Colonial and Indian Exhibition, London, 1886. These are some of the proofs that go to show that the gold lodes in the Huronian rocks, which are so extensively developed in the district, can be relied on for permanency here as well as in other great gold fields."

SILVER.

Mr. P. McKellar writes of recent date: "At Pays Plat river, Nipigon bay, about 25 to 30 miles west of the Empress gold mine on Jackfish bay, a silver discovery was made in the fall of 1895 by Mr. J. Weiden of Fort William which promises to be a valuable find. The vein is reported by reliable parties who have seen it to be enclosed in archæan rocks, to be 4 to 6 feet wide, and to continue for a long distance." Samples of the ore, Mr. McKellar states, would average two or three thousand ounces of silver to the ton. It resembles the bonanza ores of the Thunder Bay silver mines. The silver, both native and glance, with some galena and copper and iron pyrites, is disseminated through a veinstone which is largely fluor spar. In view of the character of the vein, the enclosing rock formation, and its proximity to the great lake Superior trough, it is considered significant. If it proves a valuable lode, as the showing indicates, it will no doubt encourage the working of many of the Thunder Bay silver mines to greater depths. A large number of locations have been surveyed and taken up on this vein, and much mining activity is expected when the navigation opens.

Discovery of silver at Pays Plat.

COPPER AND NICKEL.

At the date of my first visit of the present year to the Copper Cliff mine, May 16th, work was being vigorously carried on both in the mine and at the smelters under the continued general management of Mr. James McArthur, whose unremitting attention is given to every department of the work. The roast yards are managed by Messrs. Trist & McKinnon, the contractors for roasting and delivering the ore at the smelters. A couple of days were fully employed in looking over the whole of the operations, both underground and outside work.

Copper Cliff Mine.

Considerable work had been done in the mine since my last entry in the Inspector's Book. The new shaft had been sunk to a depth of 58 feet below the former measurements, making a total distance of 93 feet on the incline between the seventh and eighth levels. It had also been continued from the eighth to the ninth level, at the same incline, a distance of 72 feet. It had then been extended down below the ninth level 8 feet, making a total depth from the point where it intersects the old shaft at the third level on the incline of 77½° of 384 feet, and a total depth from surface on the incline of 657 feet. The shaft was neatly and securely timbered and fitted for use to the bottom; ore hoisting was being constantly done through it. The extensive stope referred to as the last item in the former report has been continued from the sixth to the seventh level, and the principal part of the ore removed between these levels. In the seventh level, 80 feet south from the new shaft, a vertical winze 6 by 8 feet had been sunk in the ore body to the eighth level. In the eighth level a drift had been run in south from the shaft 100 feet to the winze and a short distance beyond. At 75 feet from the shaft the ore body was reached. Thirty feet below the floor of the seventh level a stope was being opened in the winze. A stope was also worked in the

Extent of mining operations since the previous inspection.

eighth level drift at a point where the ore was intersected, 28 by 57 feet with a rise of 15 feet. In the ninth level a drift south from the shaft had been extended 100 feet to the ore deposit, and about 25 tons of ore had been taken out at this date. The mine was safely protected, and the work was being done systematically and apparently with care. From 60 to 70 men were employed in the mine and about 200 tons of ore were lifted per diem on the day and night shifts.

Outside work

The trestle railway track over which the ore, with other supplies of material for the furnaces is hauled, had undergone material improvement. For the distance of 800 feet it had been supplied with additional substantial plumb and buttress posts; 800 new ties had been put on with new flooring. At other places where required new timbers had been put in place, making the whole of the elevated track strong and safe. While examining the trestle work in company with the manager a train of nine loaded cars passed over it, the net weight of ore being not less than 160 tons, while the gross weight of cars, locomotive, water, etc., would be fully 130 tons, making a total strain of 290 tons, and although the train was moving at a fair rate of of speed there was but a slight tremor and no indications of weakness. A simple device is adopted as a signal against accident to persons riding on the top of cars while passing under bridges or overhead staging. Short pieces of cord are suspended across the track at some distance from the place of danger, which may be felt by the party exposed. Casks filled with water are placed along the elevated track as a protection against fire.

Water supply.

A pump of 8-inch discharge and capacity of 750 gallons per minute supplies all the water for the furnaces and smelting works, by lifting it a distance of 1,000 feet with elevation of 50 feet to a large reservoir which feeds every department of the smelters. The water passes through a fine screen to exclude all impurities before entering the pump. Under the same neat covering an auxiliary pump of 300 gallons per minute is kept in readiness for use in case of tempory failure of working pump, or when the same requires repairs. Ample provision is made to protect the buildings against fire by a plentiful supply of hose and several hydrants attached to the large water pipe.

The smelters.

Both smelters, which were in good condition, were kept constantly running (except in case of temporary stoppage for repairs) and were treating the usual quantity of ore. The slag runs out in a continuous stream through the spout and is emptied into the large water tank outside the building; thence it is lifted in its granulated state by chain elevators and dumped into tram cars and run over enclosed elevated tracks to the huge waste heaps. Since my former report another chain elevator plant has been added, and it is estimated that at least 200,000 tons of slag have accumulated.

Machinery

All the machinery including the two boilers and two engines at the smelting works, and the same number at the mine, as well as the compressor, was in excellent running order.

Fuel.

A supply of 10,000 cords of wood was on hand; a couple of thousand tons of coke and a quantity of coal.

The roast yard was under the direction of Messrs. Trist & McKinnon, the contractors, who received the ore on the cars, place it on the roast beds, calcine it, and deliver it at the smelters. Time is allowed for the roast heaps to cool before being broken up for removal to the smelters. About 20,000 tons of roasted ore and 6,000 tons in the raw state were on hand. The work on the roast yard was apparently being done with care. Roasting the ore.

The entire force employed by the Company and at the roast yards would exceed 300 laborers. The sanitary arrangements were carefully looked after, and the public school under two efficient teachers was well sustained. Religious services are conducted every Sabbath, and a good Sabbath-school maintained. Employés

On October 30th and November 1st I again made a careful inspection of the Copper Cliff mine and was pleased to find the work in good shape. At this date the principal part of the work in the mine was being done in the eight and ninth levels. In the eight level there had been an advance in length 43 feet, making the total length of stope 100 feet. The width had been extended 28 feet, making total width 56 feet, with an additional rise of 45 feet, or a total elevation at the highest point of about 60 feet. In the ninth level nearly all was new work excepting the drift. The length of stope was 85 feet, width 31 feet, and elevation about 50 feet. Partitions and doors had been placed in the third, fourth, fifth, sixth and seventh levels, walling off the irregular currents of air and securing better ventilation in the eight and ninth levels, especially in the former. A winze was required to be put through from the eighth to the ninth level to insure good air. The captain said that this would be done at an early date. A 4-inch air pipe extends from the third down to the ninth level, through which the compressed air passes, supplying power for the drills and pumps and aiding in ventilation. All approaches to the shaft were protected by railing. An excellent system of signalling has been adopted for the safety of the men and mine, and the printed rules signed by the general manager and captain of the mine have been posted up in conspicuous places. The following notice is affixed thereto : Second inspection. Progress of workings in the mine Signalling.

"Any one found violating this law will be discharged from the Company's employ."

Capt. Henry Davis has the direction of the work in this as well as in the Stobie mine ; Mr. John Greer is the master mechanic. Both are required to make daily reports of any defects, repairs, improvements or other needful matters, the entry of which is recorded in a book kept for this purpose. The same applies to the trimming of walls, etc. in the mine. Officers of the mine.

The rock house was in good shape. Two new cables for lifting ore had just been supplied in place of old ones and two additional automatic steam whistle signals to give warning of skip dumps were being put up. The gongs were also retained. Rock house.

The boilers were properly supplied with water and steam guages and safety valves, which were kept in good order. The engines, compressed drums and all machinery were working smoothly. The rock breaker, sorting tables, and Machinery.

screens were examined, as well as the machine shop, which latter contains a small engine, two lathes 12 in. each, planer 10 by 30 in., drill press, bolt cutter 1 to 1½ in., circular saws etc. A long coil of hose was kept in readiness in case of fire. The changing and drying room, 18 by 30 feet, was supplied with all necessary conveniences for the men.

Roast yard and smelters.

I passed over the roast yard a couple of times and the work was being done with apparent care. The smelters were running with their usual capacity under the charge of Mr. Thomas Kilpatrick, to whom is remitted the management of this department.

The laboratory.

The laboratory was a scene of active and skilled industry, with Mr. David H. Brown, a gentleman of large practical experience as chemist, and Mr. Shuler as assayer. The following is an account, courteously furnished me by Mr. Brown, of the daily routine of laboratory work so far as it relates to the sampling and determination of copper-nickel ores and their products :

The routine of the laboratory.

"The laboratory of the Canadian Copper Company is so arranged and equipped that the metallic contents of any ore or furnace product can be determined in the minimum of time and with the maximum of accuracy. It is of the utmost importance that the sample analyzed should be what it purports to be, that is, a mixture representing an equal weight of substance from every unit measure of the product sampled. That is to say, a sample of matte should contain an equal number of particles from every pot of matte thereby represented, and a sample of ore used in one day should contain an equal weight of ore from every barrow load of ore in that day's supply. To produce this result, the greatest care is necessary, since an accurate analysis of an inaccurate or imperfect sample is as useless for all commercial purposes as an inaccurate analysis of a correct sample.

"As the ore is received from the roast heaps it is dumped into bins on the furnace floor, and taken to the furnace in hand-barrows. The sampling is effected by taking a small shovelful of ore for each barrow load in a charge, the shovelfuls being thrown into a box which is emptied every twenty-four hours. The ore sample is taken every day to the sample room and the entire lot passed through a small Gates crusher to reduce it to uniform small size. This ore is now spread out, thoroughly mixed and quartered, the quarter sample again crushed and mixed, and a bottle full of the remainder set aside as an average of that day's ore supply.

"At the end of the week a list is made from the furnace book of the amount of ore used at the furnace each day, and from each daily sample an amount of ore is accurately weighed in exact proportion to the number of tons of ore used on that day. Seven such weighed samples representing a week's work are mixed, passed through a fine sieve, and a small amount of the mixture sent to the laboratory for analysis.

"The sampling of matte is made when the material is in a molten condition, for owing to the segregation of metals in the matte an accurate sample can not be obtained by breaking from the outside or centre of the pot. The tapper plunges to the bottom of each matte pot, when filled

with melted matte, a smooth iron bar about one inch in diameter. This bar on being immediately withdrawn brings with it a thin skin or coating of matte, which on cooling falls into the bucket in which the bar is kept. A sample of slag is taken at the same time by catching a small ladleful as it flows over the slag spout. These daily matte and slag samples are treated as the ore samples are in order to obtain a thorough average of each lot, or week's product.

"The laboratory samples of furnace products, as well as of ores from the mines, are all kept in a large cupboard for at least a year, in order that any question which might arise in that time may be set at rest by a second analysis of the samples in question.

"Duplicate determinations are made for copper and nickel in each week's product of ore, slag and matte, and in the case of mattes a further analysis is made of each consecutive hundred tons produced, and also of each shipment as it leaves the yard. In this way the matte has three samplings before it goes to the purchaser.

"At regular intervals complete analyses are made of the mattes to determine the total contents.

"The equipment of the laboratory differs in no way from any modern analytical workshop. Electricity is used to determine the amount of copper and nickel present while the precious metals are determined by fire assay. Three very accurate Becker balances are used in final weighing.

"A library containing all the books, pamphlets and patents that appear on nickel or copper-nickel is a part of the laboratory equipment, and is of valuable service in keeping this branch of work abreast of the times."

The general manager has projected a circular railway track, extending a short distance beyond the mine and forming a curvature of 700 feet across from side to side. The roadbed was being made by filling in granulated slag of sufficient width to store an almost unlimited quantity of wood alongside the track. By this happy expedient the wood can be unloaded from and reloaded on the cars without hauling by teams, while the train, by taking the short circuit, reverses its course. The old powder house, which was standing near the centre of the circle described by the track, has been superseded by a substantial fireproof structure, placed some distance outside the track. In the centre of the circle a large reservoir of pure water has been secured and covered with a neat frost-proof building. To the reservoir may be attached a hydrant and hose in case of fire in any of the buildings. The carpenter shop standing near the track has been sufficiently enlarged to render it convenient as a locomotive shop, into which any disabled locomotives or cars may now be run for repairs. All the ordinary appliances for this purpose are attached. These new departures in improvement indicate the economic methods adopted in the management of the company's works.

Economic improvements.

A recent communication from the manager states that the winze has been put through from the eighth to the ninth level, and that good ventilation is now secured in the ninth level; also that additional stoping had been done in both the eighth and ninth levels since my last visit. The mine was

Further progress at the mine.

closed down late in December, except for development work and shaft sinking. The captain says: "We have our shaft well on the way down 30 feet, and we are getting ready for the pentice. We have also started a winze at the ninth level for the purpose of ventilation and to give a better chance to open up the stope at the tenth level."

Stobie Mine.

On May 17th a visit of inspection was made at the Stobie mine, accompanied by Capt. Davis, who has charge of this mine as well as of the Copper Cliff. I had the pleasure of meeting Messrs. H. P. McIntosh, of Cleveland, secretary-treasurer of the company, and George F. Allen, of Akron, Ohio, stockholder, who, accompanied by the manager, were here looking over the property. A total force of 60 laborers was employed in the open pit and on outside work. John Harris and Wm. Skews were foremen for day and night shifts in pit work.

State of the works at first inspection.

The water had been removed from the pit, and the skip track extended down to the bottom of the workings, a depth of 85 feet from surface. The underhand stope, 46 by 54 feet, had been extended down 15 feet since the former measurement; three drills were here used, and work was being done on the sides of the pit, taking out the ore to the depth of the skip track. From the open pit at the west end of the tunnel (described in my former report) another drift 8 by 9 feet had been run in west and advanced 43 feet. Two drills were being used at this place of working. As shown by the register, 611 skips of ore of over a ton each had been taken out during the previous week, and 66 skips of barren rock. The rock house had been securely staged, and due care was taken not to overload it. The ore is crushed previous to its shipment to the roast beds at Copper Cliff. The two large boilers were supplied with water gauges and safety valves, kept in good order. About 80 lb. of steam was carried, with blow off at 88 to 90 lb. Twelve cords of soft wood were being consumed in 24 hours. A large quantity of wood is brought in and corded up at the railway track, and thence it is conveyed by daily train over to Copper Cliff.

Second inspection.

This mine was again inspected October 31st. No changes since my previous visit had been made in the mine, engineers or foremen. Seventy five laborers were employed 10 hours per day, and about 180 tons of ore taken out daily and shipped to the roast yards. The open pit had been sunk to an additional depth of 26 feet, making total depth from surface 111 feet; additional length of 70 feet, making total length 116 feet; and additional width of 7 feet, making total width 61 feet. The new drift in the other open pit which was being worked at the date of my former inspection had been advanced 7 feet, making total length 50 feet. Work was suspended at this point.

Progress noted.

State of the mine and machinery.

The main workings in the pit were considered safe, excepting a point of rock jutting out near the skip track, which I directed should be removed. The timbers over the skip track supporting the roadway above were sprung and showed weakness, and new additional timbers were being put in. The machinery was kept in good condition. The boilers were neatly cared for, being oiled weekly and cleaned out regularly every two weeks. I examined

all appliances for safe running, water gauges, dials, blow-off cocks, etc., and found them in place and working well. The rock house was standing firmly, and was not too heavily weighted with ore. I called the attention of the master mechanic to the necessity of placing a railing along the runway to the sorting tables. All barren rock sorted in the mine is dumped on waste pile from the skip track before entering the rock house.

Work at the Stobie mine was suspended last of December, except fitting up for extensive operations in the spring. The skip track will then be changed, a shaft sunk from the bottom of the open pit, and levels will be run in through which the ore will be taken out. The pit is as deep as open work should be conducted. The powder house is located 200 yards from the mine, Winter work.

The changing room required lockers for the safe keeping of the clothes of the workmen while in the mine. This building was also used for thawing the explosives. I directed that this should be done in another place prepared for the purpose. Drying room.

Two or three years ago, at a point one mile west of the Stobie mine, three test pits were sunk to the respective depths of 15, 18 and 20 feet on which work may be resumed in the future. The place is designated as the Little Stobie. *The Little Stobie.*

No work has been done at the Worthington mine since the middle of September, 1894. A sufficient quantity of ore however was on hand when the mine shut down to keep the smelter at the Blezard running until July, 1895. When at the smelter in May some repairs were being made which would occupy a couple of days. The daily run was from 90 to 100 tons of ore, and the matte was shipped as fast as made. Capt. McBride had charge with a total force of 52 men. Mr. Cameron was then absent in British Columbia. All the ore had been roasted, and a supply of wood and other material was on hand to complete the smelting. The furnaces, wells and all connected with the smelters were in good condition, excepting the small part undergoing repairs. *Worthington Mine.*

The Cameron mine, distant about two miles from the Blezard mine, was being worked with a force of 12 men, under the direction of Captain R. McBride at the date of my visit, October 31st. Mr. Ian Cameron had the general management. A vertical shaft 6 by 9½ feet inside of timbers had been sunk 40 feet, and at a dip of 50° n.e. to a greater depth of 10 feet, making the total depth 50 feet. The machinery used was a boiler of 50 h.p., a No. 3 Canton pump, steam drill, horse derrick and buckets. A boarding house 27 by 46 feet, with cooking apartment 12 by 27 feet and lodging rooms above, together with stabling and outbuildings, were in process of construction. The mine presented an encouraging outlook. From a recent communication I learn that the shaft is down 65 feet, with 66 feet of drift. "The show of ore is fairly good." *Cameron Mine.* Development work.

The Vivian, Travers and Blezard mines have been closed down throughout the year. It is probable however that they will be operated again at an early date. Mines and works closed down.

Properties in Levack township.

Messrs James Stobie and Robert J. Tough are owners of three properties in the township of Levack, consisting of parts of lots 6 and 7 in the second concession and of 2 in the fourth, the nearest being about four miles from Onaping station on the C. P. R. Four years ago twenty miners were employed to open up lot 7 at a number of points, and a report made by Mr. A. Merry of the H. H. Vivian Company's works stated that the workings and face of the hill showed solid masses of pyrrhotite, with comparatively small quantities of copper pyrite. The average of a number of assays of average samples taken and made by Mr. Merry gave 3.74 per cent. of nickel in the pyrrhotite. Pits sunk from 10 to 15 feet were in solid ore. The deposit on lot 6 is on the same range, and workings have been done upon it which Mr. Merry states show large masses of solid pyrrohtite to depths of 10 to 14 feet. The average of a number of assays made by him of ore from this location gave 3.96 per cent. nickel. On lot 2 in the fourth concession deep trenches and pits have exposed large deposits of pyrrohtite over an extended area. "Quite sufficient work has been done," Mr. Merry reports, "to warrant one in inferring that we have here a deposit equal to if not greater than any mine now being worked by any company in Sudbury." Average assays of ores from the several properties gave 3.86 per cent. of nickel and 0.81 per cent. of copper. The proportion of copper to nickel in the ores appears less than in the average of Canadian Copper Co. ores; and for this reason Mr. Merry thinks it is possible to concentrate matte to a higher grade than they are able to do at that company's works.

Wilcox Copper Mine.

Copper was discovered in 1893 on lots 18, 19, 20, 21 and 22 in the fourth concession of the township of Cowper, Parry Sound district, near the shore of the Georgian bay and 12 miles south of the town of Parry Sound. Half of each lot is held under lease by Messrs. Henry Harris and Thomas Wilcox, the discoverers, who have expended about $500 in developing the deposits. Four test pits from 5 to 10 feet deep have been sunk along the vein. Assays from all the openings have shown the ore to run as high as 10 per cent. in copper and from 2 to 4 oz. of silver per ton, with traces of gold. Negotiations for sale to a New York syndicate are being made, and in the event of not selling the present owners intend to work the property on a fair scale at the opening of spring.

IRON.

Ore deposits in South Sherbrooke

Mr. A. B. Rudd of Perth has purchased the mineral rights of lot 9 in the ninth concession and the east half of lot 8 in the ninth concession of South Sherbrooke, county of Lanark. The outcropping of ore continues across lot 9 and on lot 8, showing a width of nearly the distance of the two lots. The following is a copy of the analysis of several samples of ore taken from the test openings:

Ferrous oxide	28.29
Ferric oxide	66.23
Alumina	.180
Sulph. anhydride	.168
Magnesia	.38
Silica	2.79
Total iron	68.43
Sulphur	.67
Manganese	.26

This property is six miles east of Sharbot Lake station on K. & P. Railway. Mr. Rudd has also purchased the mineral rights and opened the vein on lot 15 in the fifth concession of Oso in the county of Frontenac. The work consists of stripping the vein for a width of 15 feet, and for some distance exposing a large body of magnetic ore. The analysis has shown it to be of good grade and excellent quality. and Oso.

Of recent date 600 acres have been purchased by the Calabogie Mining Company with a view to early future operations. The Company's capital stock is $100,000, with paid up stock of $80,000. The head office is at Perth. President, J. G. Campbell; vice-president, Hon. P. McLaren; secretary, Mr. J. A. Allan; all of Perth. The principal part of the stock is held by Canadian capitalists. The property consists of lot 16 in the eleventh concession, the east ½ of 16 in the ninth, the east ½ of 16 in the eighth, and lot 14 in the seventh, all in the township of Bagot, county of Renfrew. Two hundred acres are held in fee simple, and four hundred acres by mineral rights. Some ten years ago considerable mining had been done on several of these lots. A shaft 7 by 8 feet had been put down at an angle of 40° under the escarpment to the depth of 300 feet, following the ore to the entire depth. A large quantity of magnetic ore was taken out of the shaft and stopes, averaging 60 per cent. Recently 1,000 tons were shipped to Radnor Forges, north of Three Rivers, Que., to mix with bog ores, which gave satisfactory results as to quality. Two vessel loads of the ore were previously shipped to furnaces in Ohio, the report from which was equally encouraging. A hundred and fifty feet east of the first shaft another shaft was sunk on the level, at the same angle as the former; at 20 feet vertical depth the ore body was reached and the shaft was continued in the ore only a few feet, when work was discontinued by the company and the property leased to the Kingston and Pembroke Mining Company under royalty. The latter company continued this second shaft to a depth of 65 feet, a drift was run in east 65 feet and stopes made from which were taken 3,000 tons of ore which was shipped to the Ohio furnaces. Considerable ore was also obtained from surface workings. In 1888 the property reverted to the former company, who continued work by sinking a shaft on the west half of lot 16 in the ninth concession, with excellent showing of ore. On the east half of 16 in the ninth concession there had been workings by Mr. Coe of Madoc, and as a result about 1,200 tons of ore were lifted and are now lying on the dump. Also on the south half of lot 15 in the eighth concession a vertical shaft 8 by 8 feet had been sunk 45 feet, following the ore to the bottom. Calabogie Mining Company

Working the mines.

The present company have purchased from the municipality the intervening mining right under all roadways which would interfere with the working of the properties, but they are not to obstruct the roadways. A siding from the railway can easily be laid in to the workings and the ore when lifted from the mine can be dumped on the car.

The mineral rights of the north half of lot 16 in the tenth concession have been purchased by the Hon. P. McLaren, Judge Elliott of London, and Messrs. J. G. Campbell and Wm. Hicks of Perth. A test vertical shaft 6 by Other properties in Bagot, Oso and Olden.

7 feet has recently been sunk to the depth of 20 feet on this lot, from which a few tons of loose ore have been obtained. Also 500 feet northeast of this shaft another test shaft has been put down 22 feet. For a few feet the sinking passed through clay, then a thin layer of shale, and at 16 feet depth hornblende. At the bottom the ore body was reached. The inflow of water interfered with further working without suitable machinery being applied.

Mr. Campbell has procured the mineral rights of lot 13 in the fourth concession of Oso and the north half of lot 11 in the sixth concession, as well as lots 8 and 9 in the fifth concession of Olden, all having surface outcroppings of ore and strong magnetic attraction. Development work will be done on each in the opening spring. It was anticipated by the owners of the foregoing properties that a part of the supplies of ore to be used in the Hamilton smelter, which has recently been blown in, might be obtained from these extensive ore deposits. Correspondence to this end was then being conducted. There have been erected two boarding houses, engine house, blacksmith shop, etc. The plant was purchased in Michigan and consists of a boiler 25 h. p., engine 20 h. p., double hoist, two skips carrying a ton each, a Cameron pump and steam drills, all ready for operation.

Mattawin iron ore deposits.

The Hammond iron deposits on the Mattawin river were examined by American experts for the Bethlehem Iron Company, Pa., last fall with a view to purchase. Mr. P. McKellar of Fort William writes that he had been recently informed by Mr. Hammond that an agreement of purchase was made, and that the first payment which fell due a few days ago was promptly met.

Headstrom Iron Co.

The Headstrom Iron Co. had a number of miners employed for a couple of months back, testing the Animikie iron beds between Thunder bay and Loon lake with a view to work and ship ore to the Hamilton smelter. Work at present is suspended.

BARYTES.

McKellar island lode, in lake Superior.

The McKellar island barytes lode has been purchased by Mr. W. P. Lardner of Duluth and his associates. The last payment was made and the stock transferred on the first of December. These parties have been testing the manufacturing qualities of the ore for some time back with favorable results. It is yet undecided as to where the manufacturing will be carried on, whether at Duluth, Chicago, or on the island.

MICA.

Canton Mine.

My inspection of the amber mica producing mine situated on lot 1 in the fourth concession of South Burgess, county of Leeds, comprising 100 acres, was made on September 14th. The mineral rights are held by Messrs. Webster & Co., American capitalists. Mr. J. E. Chown of Sydenham is the general manager, and Capt. Samuel Cordick, an old miner, has charge of the work at the mine. A force of 35 men was employed in the mine and in sorting ore. This property has been worked in previous years, but

it was not until the 9th of September, 1894, that the present owners began operations, since which time work has been continued. The workings may be described as follows: No. 1 open pit, 12 by 30 feet at the surface, has been sunk to a depth of 100 feet, with a slight incline south. Stoping was begun in the open cut at 30 feet from surface, extended southeast 50 feet, and then downward to the bottom of the pit. The ore was removed between the walls to a width of 12 feet, leaving an opening 12 by 50 feet and a rise of 70 feet. The ladderway with proper rests and convenient incline is walled off from the open cut down to near the bottom. No. 2 pit, east of No. 1, has been opened, leaving a collar of 12 feet between them as support. Stoping in the vein has been extended 60 by 12 feet, and is at greatest depth 40 feet, at the same incline as pit No. 1. Work was progressing in both pits. The stope in No. 1 had extended under part of pit No. 2 and the uprise will be made to it, pillars being left to support the walls, which are also of solid formation. A hole was being drilled through from pit No. 2 to No. 1, to reach the pump which is in the lower pit for the purpose of drainage. The rock is hoisted in buckets by the use of two derricks operated by steam, the larger one serving the purpose of hoisting the chief portion of rock from both pits. The other is used for hoisting at the southeast end of pit No. 2 for work near the surface. Drilling is done by steam. The machinery consists of a boiler of 20 h. p., an Ingersoll hoist, and a Cameron pump used for lifting water out of the mine.

Description of the workings.

The buildings are a boarding house 18 by 36 feet, a sleeping camp 20 by 30, an office 14 by 24, a mica house 24 by 24, and blacksmith shop, stabling, etc.

Buildings.

The mica when taken out from the mine goes to the mica house where it is cobbed, put into barrels and then hauled a distance of 12 miles over an excellent road to the mica house in the town of Perth. Here it is carefully culled and packed in barrels and shipped via C. P. R. to the American market. The work in the mine was being safely conducted, but no railing or guard was placed around the open pit on the surface, which I directed should be done excepting at places required to be kept open for work. The machinery was kept in good order and working smoothly.

Preparing and shipping the mineral.

In a recent communication from the manager he says that the mine is closed down at present owing to some defect in the boiler, which has been sent to Montreal for repairs.

A white mica mine at Pike lake, on the south half of lot 16 and the south half of lot 17 in the ninth concession of North Burgess, comprises 200 acres. The former parcel is held by lease, and the latter by purchase of mineral rights. The property is owned by Messrs. T. J. Watters and M. A. Allen of Ottawa. The general manager is Mr. D. G. MacMartin of Stanleyville, and the work at the mine is under the direction of Captain T. J. Smith. The mine had not been extensively worked during the former part of the year, and at the date of my inspection, September 14th, seven men were employed in pumping the water out of the deepest workings with a view to a general renovation, as its present condition is unsatisfactory and by no means safe for

Pike Lake Mine.

Condition of the mine.

the workmen. Mining previously had been done at intervals, and about half
The workings. a ton of sorted white mica was on hand, with a large quantity in the rough lying on the dump. An open cut, 15 by 35 feet, to the depth of 25 feet had been made. Immediately by the side of this pit a vertical shaft of irregular shape had been sunk to the depth of 80 feet from the surface. At the bottom of the shaft drifting and stoping had been done to a limited extent. No accurate measurements could be made in the deepest working, on account of water and the very unsafe condition of the walls. I directed that no mining of ore should be done until the walls were trimmed, the shaft substantially cribbed, and such parts of the workings as were exposed by overhanging walls should be well supported by stulls or timbers.

Machinery. The machinery consisted of a boiler, 30 h. p., a Copeland & Bacon double cylinder hoist, a Worthington pump for lifting water from the mine, derrick and steel buckets, and blacksmith shop outfit. The machinery was in good condition.

Downey Mine. Mr. A. B. Rudd of Perth has acquired the mineral rights on the south-west quarter of lot 7 in the first concession of South Burgess, on which some
Development work. development work had been done previous to the purchase. A pit has been opened under the escarpment 14 feet in width and extended 25 feet, exposing the vein for the full width of the opening. A considerable quantity of merchantable amber mica had been obtained and sold. Recently a few tons have been sorted from the dump and disposed of. The property is two miles from the Canton mine and 14 from Perth. The associated rock with the mica crystals is limestone.

Grant Mine. The Grant mine is on lot 8 in the tenth concession of Loughborough, county of Frontenac, six miles north of the village of Sydenham. Six men were employed in September under the management of Mr. J. E. Chown. The property is owned by Messrs. Webster & Co. The small quantity of mica mined at this date had been hauled to Sydenham and sorted for market. Several open cuttings had been made, the deepest 20 feet. A derrick with horsepower was in use for hoisting rock. In a late letter received from the manager he says: "Since meeting you we have made five openings, and all excepting one of the veins pinched out with hard rock at a depth of from 10 to 20 feet. The opening we are now operating with a force of four men and a horsepower derrick is on the north part of the lot. The shaft is nearly perpendicular and is 35 feet deep. The vein runs northwest by southeast, dipping slightly to the southwest. The associated vein matter is lime and pyroxene. The output at present is about 1,000 lb. per week. We are doing some prospect work on the old Smith & Lacey mine, but as yet have nothing special to report."

Baby Mine. Baby mine is on the northwest half of lot 13 in the fifth concession of North Burgess, 100 acres, and is owned by Mr. T. J. Watters of Ottawa. For three months previous to my inspection (Sept. 13th) it had been worked with a force of 8 men and from two to four tons of crystals had been taken out monthly, which produced eight tons of merchantable amber mica. The

workings consist of an open cutting 70 by 20 feet, with graduating depth from 20 to 85 feet. At the bottom a stope had been made 18 by 35 feet, with a rise of 18 feet. The walls were firm, although the formation varied, and a considerable quantity of waste rock had to be lifted. The inflow of water retarded to some extent the work of mining. Mr. MacMartin has the general management, while Captain T. J. Smith has charge of the work at the mine. The machinery was in good condition and consists of a boiler of 15 h. p., an engine, single cylinder hoist, a No. 3 Ingersoll steam drill, and a pump for boiler. Hoisting is done in buckets. A tent blacksmith shop and mica house comprise the buildings. Extent of workings.

The MacMartin mine property is composed of lot 1 in the sixth concession of North Burgess, 200 acres, and had been worked extensively for phosphate in former years. Mr. MacMartin was engaged when I was at that place, September 13th, in sorting for market a small stock of amber mica which had been recently mined. In several places there was an excellent showing of mica, easy of access. The place is held by lease. *MacMartin Mine.*

The Harris mine is on lot 18 in the second concession of the township of Fergusson, 10 miles north of Parry Sound. It was discovered in March, 1894, and has been worked since at intervals by from two to four men. Fifty acres have been leased by Messrs. T. T. Freeman, of Salamanca, T. C. Freuse, of Olean, both of the State of New York, and A. Short, of North East, Penn. These gentlemen have formed a company known as the Georgian Bay Mining Company, with a capital stock of $60,000. The mine has been operated by Mr. Henry Harris, who resides within 1½ miles from the workings. Work at the mine had ceased a short time previous to my visit, October 5th. An open cut had been made 30 feet in length, 7 feet in width, and at the greatest depth 25 feet. The vein was about 3 feet in width and the mica white, though somewhat mottled. Large crystals had been obtained, some of 500 lb. weight, and although many of them were twisted yet 20 per cent. of the product was merchantable, some of which had cut as large as 8 by 10 inches. Between two and three tons had been marketed, the return from which had covered the entire expense of mining. At this date over $500 had been expended on opening the mine and handling the product. Another test opening had been made at a quarter of a mile distant on Crown lot No. 17, in concession 2. A few shots had been put in exposing a quantity of pure white mica, although the crystals were irregular or twisted. It is probable that as greater depth is attained the crystals may be found free from this serious defect. *Harris Mine.*

Oak Ridge mine is situated 1½ miles east of Waubamik, on lot 8 in the twelfth concession of the township of McDougall, Parry Sound district, and was discovered in July last by Malcolm McNeil. The lot was owned by Mr. John Campbell, who transferred it recently to F. ederick P. Leushner. The present owner has done development work in stripping the vein for some distance, which shows a width of 7 feet and has outcroppings for 500 feet. The mica is white, but shows the defect peculiar to this imme- *Oak Ridge Mine.*

diate locality of being spotted. The owner intends to determine the value of the property by active development.

Valentine Mine.

Valentine mine is on lot 12 in the tenth concession of McDougall. The lot is owned by Mr. John Land, of Waubamik, but the mineral right has been obtained by the Valentine Mining Company. Mr. James Mitchell, a part owner, with a force of from 3 to 5 laborers, has conducted development work from June up to the latter part of October. An open cut has been made 14 by 18 feet to the depth of 15 feet. The vein has shown a width of 12 feet. A small boiler and engine for hoist and running a drill has been used. The output of merchantable mica has not been large. The expenditure up to the date of my visit, November 5th, has been about $1,000. The mica is of fair quality.

McNiel Mine.

McNeil mine is on lot 11 in the first concession of the township of Fergusson. Mr. McNeil, who owns and resides on the lot, has transferred a two-thirds interest of mineral rights to Messrs. John Bartleff and Louis St. George, and retains the remaining one-third. A few test openings have been made along the outcropping of the mineral and some excellent specimens of white mica have been taken out and marketed. Judging from the surface indications, as well as from the work done, the property may prove very valuable in its yield of a good quantity of mica, though not entirely free from the mottled appearance. It is but a short distance from the Waubamik post office. It was lying idle at the date of my visit, November 5th.

Burpee Mine.

A small amount of prospecting has been done on a lot in the township of Burpee by Mr. Henry Harris, the discoverer, and some excellent specimens of pure white mica obtained and marketed in Toronto at $2 per lb. The property is seven miles west of Waubamik (which means White Beaver) and 30 miles from Parry Sound. The vein has been stripped for a distance of 40 feet and to a few feet in depth. Three men were employed, and if on further development the showing continued satisfactory the force would be increased and work conducted on an extensive scale.

GYPSUM.

Paris Mine.

The Paris gypsum mine was visited July 24th, when both mine and mill were lying idle. Work had been vigorously carried on during the earlier part of the season, and it was expected would soon be recommenced. Some refitting had been done at the mill.

Description of the workings, and condition of the mine.

On November 27th I again visited the mine and found it in a fairly safe condition. The main drift had been extended 200 feet south from the surface entrance near the river, and a large quantity of gypsum rock removed. Work was being done at a point 65 feet from the extremity of the drift, by blasting out the breast of the layer of plaster to a width of about 8 feet and walling up the old workings with the waste rock. When enough rock was not at hand to build sufficient pillars, strong stulls were put in for support to make the place of working safe. During the time the mine was not

worked there had been an extensive cleavage of rock from overhead in the old workings caused by the weight above, rendering these parts of the mine unsafe. The formation above the layer of plaster, from 3 to 4 feet in thickness, is not solid. Above the plaster is a layer of slate from 2 to 3 feet in thickness; above this layer is another of plaster of about 18 inches in thickness, above which is conglomerate and principally clay as it nears the surface, which in perpendicular elevation from the place of working is about 85 feet. The three workmen employed were taking out from 3 to 4 tons of plaster daily; this was hauled a distance of $1\frac{1}{2}$ miles to the mill in the town. The plaster is mined by contract. The air was bad in the extremity of the drift, and I advised placing a large heated stove at the mouth of the drift to be fed with air through a pipe from the back end, which would cause a circulatory motion of the atmosphere and secure proper ventilation for the men while working. At this date the mill was in vigorous operation, manufacturing the different products to which gypsum is applied. A large demand has grown up for the output of the company's works, especially the product alabastine, which was being put up in 5 lb. cans for shipment. It is used for decorating walls in a great variety of shades. Instructions for intermixing tints are given as follows: "By intermixing our tints the painter can make any shade that can be made with colors and white, and can easily make the same again by measure. The surface produced by alabastine is richer and has more lustre than any of the so-called water colors or paints; while it is what is called a dead surface, it has a rich crystal-like lustre. The base of the material from which it is made is treated by a patent process that polishes and preserves its atomic crystals, which under a powerful microscope are transparent, though in a body they are very opaque. The tints are made by automatic machinery, and are permanent and uniform." I have examined some of the walls treated by this finish, which present exquisite beauty. The alabastine also, it is claimed, serves as a disinfectant, a quality which cannot be secured in wall papers, especially when old. I was told by Mr. R. E. Hare, foreman of the mill, that shipments in cans to the extent of 15 tons of alabastine had been made during the year to Australia, where this enterprising company has an agent constantly employed. Large quantities of plaster have been ground during the year for land fertilizing, and a very increased quantity prepared and put up in barrels with other admixtures as potato bug finish. The demand for it in the calcined state is large. Other supplies of the rock besides that mined at Paris are brought from the beds in the vicinity of Cayuga. There is prepared at the mill for commercial purposes land plaster, calcined plaster, paristone wall plaster, potato bug finish, alabastine, tellstone (a cheaper product than alabastine), and paint for oil barrels. Mr. T. W. Wheeler of Paris is the manager of the company.

The mill at Paris.

Alabastine.

Land plaster and other products.

On lot 16 in the first concession of the township of Brantford, one mile east of Paris and on the north side of the Grand river, a new opening for plaster was being made. The property, comprising 133 acres, is owned by Mr. John Torrence of Paris, and occupied by Mr. Wm. Hynes as tenant,

Torrence Mine.

who is an old miner, who, in company with James Wright, another miner, had driven in a shaft from the brink of the river north 45 feet at the date of my visit, November 27th. Limited prospecting had been done at the place of opening some fifty years ago, but the work was abandoned and nothing further done until the present year. Along the drift some excellent specimens of plaster were obtained, intermingled with slate; the extremity of the drift was in clay. It was the intention, I was told, to advance the work much farther in the same line, with the expectation of intercepting the regular layer of plaster.

Garland Mine.

I went through the Garland mine July 18th, when two men were employed in refitting some parts of the drift which had become seriously dilapidated in places. Mining work had been suspended for three weeks. At the bottom of the incline drift, 80 yards from the surface entrance, a new drift had been run in east for the distance of 100 feet to the continuous layer of plaster. Patches of plaster had been met as the work progressed. It was intended to extend this drift in the layer of plaster to determine its extent. In the old regions of the mine the plaster had been worked out with the exception of a large pillar left as support. I directed that the old drift from the entrance to the point where the new drift began should be thoroughly refitted with new and substantial supports, as many of the parts were badly decayed, as well as some of the flagging overhead. About 250 tons of plaster had been taken out during the present year and hauled to the mill in Caledonia.

Workings and improvements.

Second inspection.

On November 28th, when I again visited the mine, the new drift had been extended only a few feet beyond the former measurement, making the total distance from the old drift 108 feet. Work other than fitting up the mine had been suspended in the latter part of the summer. The new drift I found in excellent condition; the old drift had been supplied with new timbers in many places, and for the time being was considered safe. Nothing had been done in the old workings, which were in an unsafe state for work. The large pillar of ore left for support will not be removed at present, as it protects the part of the mine where the air shaft has been put down for ventilation. Mr. Wilkinson, who has charge of the mine and who resides on the place, informed me that work would be commenced immediately in taking out plaster, which he does by contract and hauls to Caledonia at $1.30 per ton; he however has the use of the buildings and thirty acres of land, free of charge. Should the layer of plaster extend beyond the limit of the property on which the work hitherto has been done, Mr. Garland has arranged to have it mined on royalty. The yield in the direction of the new drift may be large. About 300 tons will be the output for the year.

Martindale Mine.

Two men were employed in the early part of the year at the Martindale mine, taking out plaster by contract. At the date of my visit in August work was suspended. Later on in the year some mining was done and abou 200 tons were obtained as the season's output.

The Excelsior mine although closed down at the date of my visit in August was carefully examined, and in several places repairs were required to render it safe. Mr. Nelles, the manager, informed me that it would be substantially refitted before work was resumed. About 600 tons of plaster had been taken out in the early part of the year and shipped to Paris. *Excelsior Mine.*

In August the Teesdale mine was lying idle, but later in the season a considerable quantity of plaster was mined. *Teesdale Mine.*

EXPLORING FOR OIL AND GAS.

When at Sharbot Lake on September 16th, I met Mr. B. C. Steel of New York, who was engaged in boring for coil oil on behalf of himself and other American capitalists at Verona. The boring was being done on the property of Mr. George Smith, at a point known as High Falls in the northeast corner of the township of Portland, county of Frontenac, near Long lake, which empties into the Napanee river. Here is an excellent water power and a grist mill. The place of boring is in a basin or flat, and the surface formation is broken and rocky. Five men were employed at this date, and the drilling had reached a depth of 475 feet. The boring passed through hard pan from the surface for 15 feet, then 10 feet of very soft quick sand. Next came 70 feet of pyroxene and about 4 or 5 feet of asbestos, and underneath a layer of 5 feet of white quartz, beneath which the bore passed through 220 feet of slate rock, then 26 feet of open sand (or first sand) and next came blue slate rock which had been pierced 124 feet, in which the boring was being done at this date. The depth of 700 feet, I learn of recent date, has been reached. The bore is of 8 in. diameter for the first 175 feet, and then 6 in. diameter. Mr. Steel stated that it was intended the bore should go down 1,400 feet (if oil was not obtained sooner) before the venture should be abandoned. The whole equipment for boring is very complete. The parties interested in this enterprise profess to be sanguine that the great oil bearing anticlinal runs to the junction of the Potsdam sandstone with the Laurentian escarpment, near which they are operating. Drilling operations for oil in Portland township, in the county of Frontenac.

In the last report a short account was given of the gas wells at Caledonia. On November 28th I visited this location again and Mr. Walker, whose private well has been completed, gave me the following description of it. He says: "At the depth of 285 feet we struck a strong flow of sulphur water which rose 4 feet above the top of the well. At 375 feet we placed a casing 5⅝ in. in diameter in the bore and cemented the casing to the rock with Portland cement, using four barrels of cement and one load of sand, which not only secured the casing but stopped the flow of sulphur water. At 380 feet we got our first supply of natural gas; a greater flow was obtained at 395 to 400 feet, when we struck the Red Medina formation. After going two feet in that rock the drilling was discontinued, as the flow of water was very strong with salt, with traces of oil. A half-inch pipe was put to the bottom of the bore and then by closing the top of the well the pressure of gas blows out the salt water. This on trial works well. A main has been laid from Walker's gas well at Caledonia.

the regulators to supply houses with the gas. The pressure at the well is 190 lb. Between the well and the regulators an oven is placed through which the gas passes, taking out the moisture before going to the regulators. It first passes through the high pressure regulator and is reduced to 25 lb., and thence passes through the low pressure regulator and is reduced to 4 oz., mercury pressure. This well supplies one furnace, 9 stoves and 40 burners, leaving a pressure on the well of about 150 lb., varying from 140 lb. at the lowest to 170 lb. at the highest. "I am satisfied" Mr. Walker says "that tha gas has increased in flow since we commenced to use it." Total cost of well, piping, etc., $1,350. Its production will reach annually in value a few hundred dollars.

Caledonia Natural Gas Company's wells.

A local chartered company has been formed composed of twenty citizens of the town, known as the Caledonia Natural Gas Company, Ltd., with capital stock of $3,000, all paid up, in shares of $25 each. Since Mr. Walker's well has been completed the company has drilled another well, which makes in all three now owned by them. The flow of this last well is exceedingly good. The pressure at well is 190 lb. and makes gas rapidly. A 2 in. pipe was placed in this bore when completed, and at the surface with a 2 in. opening when lighted the flame jets up 30 to 35 feet; it was left burning for a couple of weeks previous to being utilized for domestic use. The rock formation is the same as in Mr. Walker's well, excepting a layer of plaster which is only 2 feet in thickness, and the gas rock is slightly more porous. The company paid by contract $750 for drilling 450 feet. The return from the well to the company I was informed was about $45 per month above expenses. There are five producing wells in the vicinity at present.

Scott's well.

At a distance not exceeding 200 feet from the best flowing well belonging to the company, designated well No. 1 and between it and well No. 2, Mr. William Scott drilled a private well to the depth of 550 feet with unfavorable results. The formation was similar to that in the other wells, with the difference that the gas rock was very hard and but little gas accumulated. The overflow of sulphur water occurred the same as in the Walker well. As an experiment 50 lb. of dynamite was put down the bore from the surface 400 feet and exploded, but without producing any material change in the output. Although the location and boring would indicate a good return, the venture proved a failure, and the well has been sealed up to prevent the very unpleasant sulphur odor emitted from spreading over the neighborhood.

USE AND ABUSE OF DYNAMITE.

Improper handling of explosives.

I have had occasion frequently to call attention to the improper handling of explosives. For the safety of mine operators their attention is invited to the requirements of The Mines Act 1892, under the head of General Rules, section 74, subsection 2. It will also be of interest to all miners to note the following exhaustive and instructive paper prepared by Harry A. Lee, Commissioner of Mines for the State of Colorado, on the Manufacture, Use and

Abuse of Dynamite, which is reproduced in a recent number of the Engineering and Mining Journal of New York, in which he says :

"Under the most favorable conditions the manufacture of dynamite is a hazardous business, safety being entirely dependent upon the purity of the materials used and the skill and care of the workmen employed. In the manufacture of explosives as in all lines backed by American ideas and energy, the American product stands pre-eminent. Although the first plant was established in this country only a little over 20 years ago, the art has today reached that point of perfection, brought feats of engineering within the range of possibility, and exerted an influence upon modern civilization which entitle it to take rank with the application of steam power.

The manufacture of dynamite a hazardous business under the best conditions.

"The aim of the various powder companies is to supply a product which can be transported and handled with safety, give uniform results in blasting, keep in good condition when properly stored, and, as far as possible, neutralize all poisonous fumes when exploded. The explosives used almost universally throughout Colorado are compounds having nitro-glycerine for a base, commonly called by the miner "30% powder," or "60% powder," according to percentage of nitro-glycerine in the mixture.

Qualities of a good article.

"The strength of the American nitro powder is not, as is generally supposed, wholly dependent for force upon the amount of nitro-glycerine present in the mixture. The compound is composed of various elements, which in manufacture not only absorb the desired amount of nitro-glycerine, but are in themselves an explosive. In blasting, the exploder or cap, which is charged with fulminate of mercury, explodes the nitro-glycerine, and the nitro-glycerine in turn the remainder of the mixture. A line of experiments conducted by experts show that the force exerted by this combination exceeds that of the sum of the three exploded separately.

"The American dynamite of today is not an accident, but is the result of a long line of careful experiments, conducted by eminent chemists and demonstrated by practical tests. These tests, aided by great advances in the art of manufacturing, have demonstrated that the products can be handled with greater impunity than many other things common to transportation by common carriers. They have also demonstrated that the safety of the compound is dependent upon purity of the materials used and care in mixing. During the past few years competition among various powder companies has been so keen and bitter that gradually but steadily the cost of dynamite to the consumer has been reduced. It is a dangerous contest, and a rivalry in which, sooner or later, if continued, safety will be sacrificed. To be more explicit upon this point—skilled labor commands a certain price, likewise chemically pure nitro-glycerine. The two being the most expensive parts in the compound of dynamite, combined the product is a safe mixture. Unskilled labor and impure nitro-glycerine can be had for less money, but the product of this combination is a mixture subject to decomposition. Decomposition in such a compound is practically explosion. Decomposition may not set in for some time, and the great danger of the competition in the manufacture and sale of dynamite is that of forcing some of the competitors to use impure or cheaper

Progress of improvement in manufacture, and the risk of keen competition.

materials and labor in order to meet a lower price, and take chances upon decomposition not commencing before the stock thus manufactured is disposed of. This danger point may not as yet have been reached. The older powder companies have much invested and a reputation to maintain; the newer companies have much invested and a reputation to make. From the standpoint of safety however the bottom price is very little below the market price of today.

Storing the explosive

"Powder should be stored in a dry, cool and well ventilated magazine built for that purpose. A brick or stone magazine is preferable to a frame, both on account of being affected less by sudden changes in temperature and freed from any danger of bullets from careless marksmen. When built of wood, the frame or studding should be covered inside and out with boards, and so set that the air can circulate all around, and the inner boards be but little affected by the heat of the hot sun. Caps should not be stored with powder.

A good article not affected by age.

"Regarding the age of powder: when powder has had proper care in manufacture and storage, decomposition will not set in. If there is no decomposition there is no chemical change, and under these circumstances powder ten years old or older is just as good and safe to handle as powder ten days old.

The safe plan for thawing powder.

"One of the main sources of accident is from thawing powder, and the only safe plan is the use of heat from hot water. The powder should not be dipped in the water, but placed in a watertight vessel and the vessel set in hot water, or a regular powder warmer should be made. These vessels can be obtained from any of the mechanical firms or from the powder companies at nominal cost. Do not place powder under or on a stove, or in the oven. Do not lay on boiler wall or on back plate of a boiler. Do do not heat around a blacksmith forge or over a burning candle. Do not lay on hot sand, or, in short, do not thaw powder with dry heat. Do not consider these precautions unnecessary, or reason that because you have done so many times there is no danger. An explosion is usually fatal, and numberless escapes in no manner reduce the explosive force. Powder freezes at from 40° to 44°F. Explodes when confined at from 320° to 360°F. From a quick application of dry heat powder is liable to explode at 120°F. A stick of powder heated to 120°F. can be held in the hand with little inconvenience, and this degree of heat is soon reached when placed on or about a stove. That frozen dynamite is liable to explode from heat quickly applied has been demonstrated many times, and to ignorance, non-appreciation or carelessness of this fact most accidents are due. If you have heated powder about a stove for years without harm, consider yourself fortunate and stop it. If the warning of those who make the powder have no effect, let the accidents constantly occurring from this cause convince you. If you cannot procure a powder warmer take a 5 lb. lard bucket, fill it with powder and set in warm water. If you have no warm water put some sharp rocks in the bottom of a larger vessel to keep the smaller vessel off the bottom, surround the inner vessel with water and set two lighted "snuffs" about an inch long under the big can, throw an ore sack over the whole, and in a short time the powder is in a good condition for use and no risk incurred. With slow

heat thus applied dynamite may be heated to the temperature of boiling water with safety. Do not use frozen powder to load a hole. It is unfit for use. If it explodes at all it will do poor work. If it does not seemingly burn or explode it may be smouldering or decomposing, and the dropping in of a spoon, a drill or the stroke of a pick or hammer be sufficient to explode what is left.

"Constant care in preparing a charge and in loading will avoid 'missed holes.' Next to warming powder with quick dry heat 'picking out a shot' is the cause of the most fatal accidents. If a hole 'misses' do not be in a hurry to return, and especially if the hole was tamped close. More accidents are caused from supposed miss holes than from actual. A small sharp rock may be tamped into a piece of fuse so that the fire will not pass that point for hours; this is often mistaken for a missed hole. The hole is picked out, this particular rock removed and an explosion follows. To fully demonstrate this, put some V-shaped clamps on a piece of fuse and see how long it will take to burn by certain points. Long after the fuse is supposed to be out, loosen the clamps and see how quickly it will spit at the other end. Some holes do miss fire and have to be picked out. In these great care should be exercised and not clean down nearer than 5 in. of cap, then reload with another charge, and instead of using a small piece of powder use plenty. A heavy charge on top may destroy the effectiveness of the lower charge, but it will explode it and get rid of a bad job. If the 'collar' of the hole is simply blown off and the lower charge has broken to the bottom of the hole, do not drop in a drill or spoon to see 'how much hole is left'; leave it alone as long as possible. The lower powder may have frozen, and all may not have been consumed. Warnings.

"Caps are charged with fulminate of mercury, one of the most violent explosives, and one of the most unstable chemically, and may explode from the slightest jar or least amount of friction. The caps at all times should be stored well away from the powder, and at no time in or around a miner's pocket. Care of caps.

"Powder should under no circumstances be stored underground. Poor ventilation with damp air will produce decomposition, and decomposition explosion. There is practically no danger in transporting powder in cases, and especially when frozen. Even well thawed powder will not explode from any of the jars occasioned by a wagon haul or pack train. A case dropped several hundred feet upon rock might explode, but separate sticks would simply break out of the wrapper and no explosion follow. Various suggestions.

"Powder will burn in the open air and not explode, providing the gases generated in the adjoining powder from the heat of combustion have room to escape. For example, place two boxes of powder side by side, open one and ignite, leave the other box closed. The burning box will not explode, but the heat will explode the closed box."

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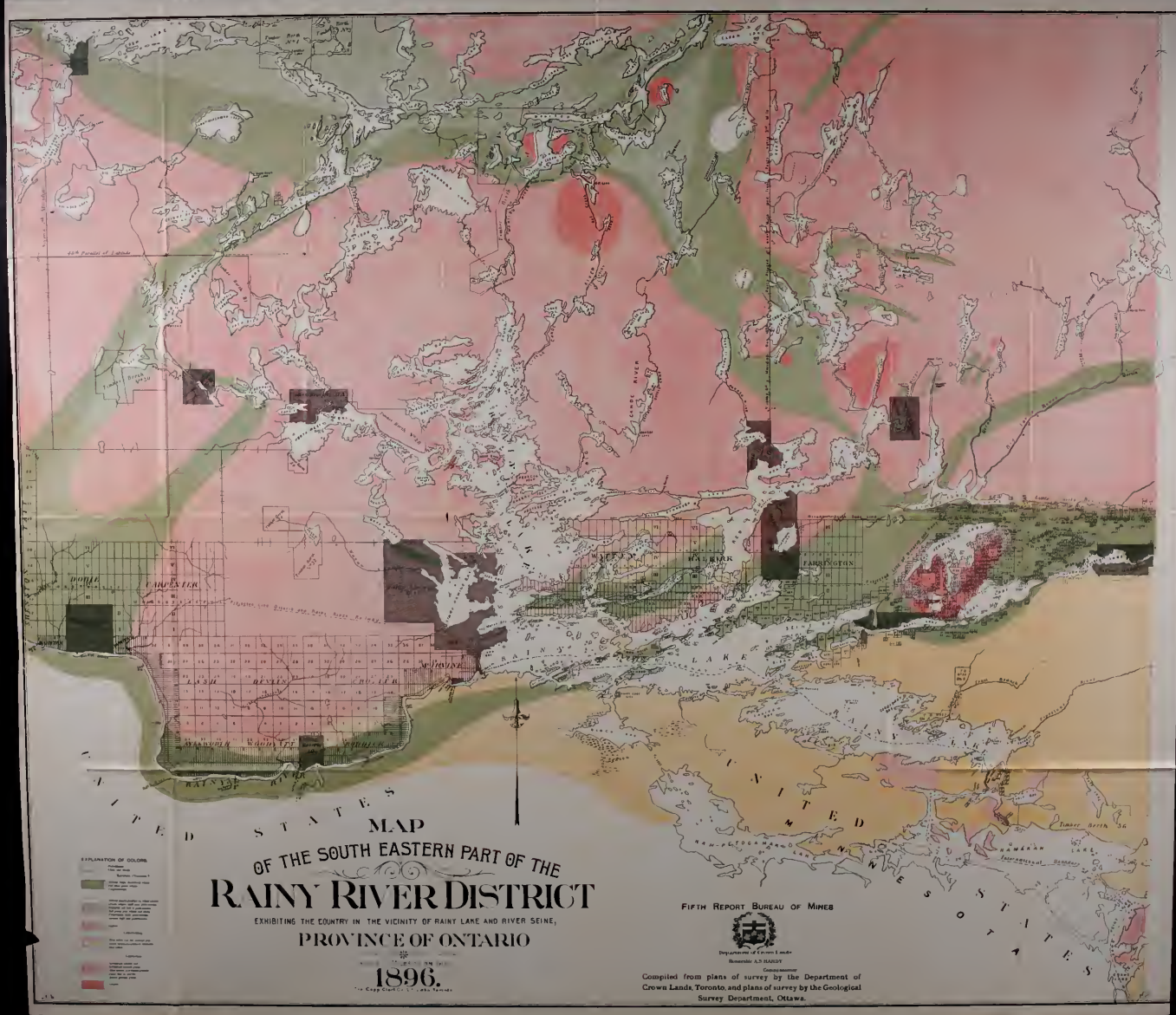
MAP
OF THE SOUTH EASTERN PART OF THE
RAINY RIVER DISTRICT
EXHIBITING THE COUNTRY IN THE VICINITY OF RAINY LAKE AND RIVER SEINE,
PROVINCE OF ONTARIO
1896.
FIFTH REPORT BUREAU OF MINES
Compiled from plans of survey by the Department of Crown Lands, Toronto, and plans of survey by the Geological Survey Department, Ottawa.
RAINY LAKE
RAINY RIVER
SEINE RIVER
FARRINGTON
EXPLANATION OF COLORS.

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